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ORIGINAL DEPARTMENT.

LECTURE.

DETAILS OF ANTISEPTIC DRESSING.¹

BY DR. J. M. BARTON,
Surgeon to the Jefferson College Hospital.

When your President invited me to your meeting, and asked me to make some remarks on this subject, I thought that almost enough had been already said and written about it, and that further argument on the subject was unnecessary, as antiseptic surgery has undoubtedly been fully accepted by the scientific world.

But as antiseptic results are only to be obtained, with certainty, by very careful attention to details, it might be of service if I were to describe in full the methods I now use; which, though perhaps not the best, give almost invariably full antiseptic results.

It will probably be best to describe some particular operation; take for instance the excision of a breast, for cancer or other tumor, at my clinic at Jefferson College.

The night before the operation the patient takes a warm bath, has clean clothing, and is placed in a clean bed. Early in the morning the axilla is shaved, the breast, the axilla and the surrounding parts are washed with turpentine, then with soap and water, and lastly with a solution of bi-chloride of mercury (1 to 1000). The entire front of the chest is then covered with several layers of cheese-cloth wrung out of the same solution. Waxed paper is placed over this to

prevent evaporation, and the patient remains in bed until the hour for operation, which is about noon.

The operations at the hospital are performed either in the clinic room, or in the private operating room; these rooms being used for nothing else, are quite separate from the hospital and its wards, are constantly ventilated, the windows being usually kept open, and only closed just before an operation. Soiled dressings are not permitted to accompany a patient into these rooms, and if they should, accidentally, are quickly removed.

In the private operating room no unnecessary furniture is permitted, one operating-table, two rolling instrument tables, and one chair being all the furniture in a very large room. There is no carpet on the floor, the walls are painted, and both walls and floor are frequently washed.

All instruments that may be needed are placed for a short time in a vessel of boiling water, and are then placed in shallow tin vessels in a three per cent. solution of carbolic acid. They are not placed in the mercurial solution, as that would quickly tarnish them and spoil their edges.

The surgeons and assistants wash their hands, wrists and fore-arms thoroughly with soap and water. After drying them they are washed in the 1 to 1000 mercurial solution, which is not wiped off.

The surgeons and assistants at the time of operation all wear clean white linen coats, fresh from the wash, which are never used elsewhere.

All sponges have been carefully prepared; those that are new have been beaten and

¹ Read before the Delaware State Association at its meeting in Smyrna, June 14, 1887.

then soaked in dilute muriatic acid to get rid of the sand, and subsequently soaked for several days in the mercurial solution. Those that have been used, have the blood washed out at once, and are then soaked for some hours in a solution of soda to get rid of the fibrin, then again washed in water, and lastly placed in a jar in the mercurial solution, with a date placed on the jar, so that they may not be used too soon.

Just before the operation, the sponges are taken out of the antiseptic fluid and squeezed dry, are then placed in a basin that has been washed with the same fluid, and covered with a towel wet with it.

At the operation no sponge is used after it is once saturated with blood, but is at once thrown aside, and does not re-appear at an operation for at least a week, during which time it has gone through the above-described process. If a sponge falls on the floor, or has laid for a moment on any place that has not been rendered antiseptic, it is at once thrown aside. The patient is now etherized, with the pad of antiseptic gauze still on the diseased breast.

The operator and assistants, after preparing their hands, are careful to touch nothing, nor to handle the patient if she struggle, nor even to touch a chair or a blanket or anything. If they should accidentally do so, the washing of the hands must be repeated.

When the patient is fully under ether, the antiseptic gauze is removed, towels are wrung out of a three per cent. solution of carbolic acid and placed all around the field of operation. They are spread over every thing, over the blanket, over the arms of the patient and under the side to be operated upon, so that a sponge or an instrument may be laid down without danger of becoming contaminated. Carbolic acid is preferred for these towels, as mercury would spoil the instruments.

After the diseased gland is removed the bleeding vessels are all tied with catgut, which has also been kept in an antiseptic solution. Three knots, at least, are placed on each ligature, and both ends are cut off short. The wound is now thoroughly flushed with the 1 to 1000 mercurial solution, and for this purpose a large stone-ware jar, holding several gallons, is placed on an elevated shelf in one corner of the clinic room, with a long rubber hose attached, which reaches to the operating table and terminates in an ordinary Davidson's syringe, with which the pressure of the fluid can be increased if desired. In private practice, a rubber fountain syringe answers the purpose. Considerable time must be spent in this process, especially if it

should have been an infected wound previous to operation, as for instance, an open suppurating joint, for which amputation or excision has been performed.

After the hemorrhage has been controlled, and the wound has been thoroughly flushed with the Mercurial solution, a rubber drainage tube, suitable for the case, is taken from the jar filled with Mercurial Solution 1 to 1000, in which they have been kept, and laid in the bottom of the wound; the flaps, if there be any, are brought together with catgut. One stitch at the end is carried through the drainage tube to keep it in place, and then a continuous suture of catgut is made from one end to the other. If the wound is a small one, like that made in trephining, or in operating for strangulated hernia, a few large threads of catgut are laid in the bottom of the wound to serve for drainage.

The closed wound is now dusted with Iodoform and covered with folded pieces of common cheese-cloth, large enough to fully cover it. These should be eight or ten layers thick, and should be thoroughly saturated with the Mercurial Solution. In the Hospitals, large specimen-jars are kept filled with such pieces of cheese-cloth lying in the Mercurial Solution. Over the wet cheese-cloth, a piece of mackintosh, slightly larger than the cheese-cloth, or a piece of rubber, or of waxed paper is placed. A strip of adhesive plaster holds this in position, and then some oakum, jute or cotton, kept in place by a bandage.

A wound from an amputation of a limb is dressed in precisely the same way.

On the following day, if there is reason to suspect that there has been any oozing, and there generally is some, the dressings are removed; the wound is not washed nor touched, only fresh mercurial cloths laid on, and the external dressings re-applied. At this time the drainage tube may be removed, though this is rarely done.

From this date on the dressings are left undisturbed, unless the temperature goes above 101°.

At the end of about ten days the wound is looked at; if it is solidly healed and the ligatures have been absorbed, the external portions of the stitches are brushed off. The drainage tube is found loose, and is removed, if of rubber; if catgut has been used, this will have been absorbed.

The patient can be discharged a few days later.

It is nothing unusual to send out a solidly healed amputation of the thigh in 18 days,

an amputation of the arm or leg in 14 days, a patient after the removal of a large breast tumor in 14 days, and an excision of the hip in a month. These patients frequently have not had one drop of pus form. They are not ill and do not require sick diet. Three days after an extensive operation they are often able to eat solid food. They are not tortured by daily dressings. Septicæmia or pyæmia rarely develops from such an operation.

In cases of severe compound fracture, the surgeon, assistants, and patient are prepared as before, the wound is enlarged, small and loose fragments of bone are removed, and the larger fragments put accurately in position. If they do not readily remain in place, they are wired with heavy silver wire. All hemorrhage is controlled by catgut ligature. The wound is then thoroughly flushed again and again with the mercurial solution, the lips of the wound are held together, while with a syringe the solution is pumped in so that all parts may be fully distended and brought in contact with the fluid.

In a case of compound fracture, where supuration had already occurred, and where the temperature was 103° , I have succeeded by this method in at once bringing the temperature to normal and checking all further supuration. After the wound is flushed, drainage tubes are introduced, the wound closed and dressed as before described; appropriate splints or apparatus must then be applied, as though the case was one of simple fracture.

In laparotomies I prefer, when it is possible, to perform the operation at the patient's home; though I have opened the abdomen several times in the hospital with success.

The patient is prepared as before; bath and clean clothes the night previous; abdomen shaved, washed with turpentine, soap and water, and carbolic solution. When operating in a private house, I choose a room where there is a good light, and, a few days before the operation, I have the carpet, the pictures, and most of the furniture removed, and the floor and paint scrubbed.

The instruments are prepared as before, and the field of operation surrounded by cloths wet with carbolic acid. When the abdominal cavity is reached, I try to make the operation an aseptic rather than an antiseptic one.

If the abdomen to be opened is free from germs, I try to free my sponges first from germs, and next from the antiseptic, before using them.

Carbolic acid, $2\frac{1}{2}$ parts to the 100 of boiled water, is used to wash the hands and to place the instrument in.

The sponges are wrung out of the same

solution, and then out of boiled water. If there is much bleeding in the abdominal cavity, and a careful toilette of the peritoneum has to be made, the sponges, when saturated with blood, are washed in boiled water, then in the carbolic solution, and lastly in clean boiled water, before being returned to the scene of operation.

If any septic material has entered the peritoneal cavity, as, for instance, when the intestines have been wounded by a stab or gun-shot wound, sponges wrung out of a 1-10,000 mercurial solution are used. If much of the septic material is present, it is customary to flush the abdominal cavity with this weak mercurial solution. This is done by emptying several basins of warm mercurial solution, 1 to 10,000, into the cavity, while the wound is held open by an assistant. Then, turning the patient on the side, the fluid escapes, while the bowels are prevented from protruding by the hands of an assistant.

If the abdominal walls are fat and apt to suppurate, or if their natural tension be not lessened by the removal of any growth, I close the peritoneum with catgut, and the external wound with deep and superficial sutures. On the contrary, if the walls be lax, as after the removal of an ovarian cyst, and if there be but little fat, I close the wound in the usual manner with silk sutures, passing through the abdominal wall and including the peritoneum.

Mercurial gauze is placed over the incision, and, as there is little probability of any oozing, this is left undisturbed, until either the temperature rises or the time arrives for removing the stitches.

COMMUNICATIONS.

PRELIMINARY REPORT OF A SERIES OF CASES OF PURPURA TREATED BY GASEOUS ENEMATA, WITH REPORT OF CASES TREATED BY OTHER METHODS.

BY WM. DUFFIELD ROBINSON, M.D., PHYSICIAN TO EASTERN STATE PENITENTIARY, AND HENRY SKINNER, M.D.

During the last two years there have occurred twenty-three cases of purpura in its different forms in the Eastern State Penitentiary. During the same time we have had but two cases of the disease in general practice outside of the prison. The one point especially noticeable in the aetiology, is that in every case there has been, for rather pro-

longed periods, an almost entire avoidance of meats in the dietary of the subjects. One pound of good well cooked meat, beef or mutton alternately, is given daily to each convict in the Penitentiary. On Sunday pork is the meat served; a bountiful and varied supply of vegetables is also daily served. These are well cooked and given in a sort of stew made in the liquor in which the meat has been boiled. Sauer-kraut, tomatoes, apples, stewed peaches, cabbage, potatoes, beets, onions, parsnips, soup, herbs, etc., etc., are abundantly supplied to every convict in sufficient variety every day. It can be seen by this that a deficient or insufficiently varied food cannot be a cause of the disease here. In spite of a good dietary, clean and well cooked and served, and sufficient air and exercise to induce appetite, it is noticed as stated, that the victims of this disease here for some time before and during its continuance, had rather an abhorrence of all meats, and had lived on bread, coffee and vegetables. There was, before the development of the disease, in no case any indication of much anemia or reduction in physical health. The development was rather sudden, in each case being preceded by general malaise and lassitude, loss of appetite, etc. They all had requested a tonic, saying that they felt run down and altogether out of sorts. Elixir of iron and gentian was usually prescribed.

In from four to fourteen days after the first complaint, the purpuric spots began to appear on the arms and limbs. With the appearance of the spots a condition of excessive anemia became very evident. Three of the cases occurred in insane subjects (delusional lunatics) two of whom died of the disease.

CASE I.—Male, aged 26 years, received in good mental and physical health, had served about forty months of a five-years' sentence, and had been in fair health. He had long been a masturbator to an injurious degree, and about this time began to look badly, lose flesh, and show a weakness of his mind, demonstrated in morbid suspicions and delusions, so very frequently noticeable in those long addicted to this habit. He claimed that the meat was bad or poisoned. He could not be induced to eat it, and therefore lived on bread, coffee and vegetables. In a few weeks the purpuric spots began to show, and he ran down rapidly in health. His mind became more deranged. The purpura increased, spots as large as a man's hand appearing on different parts of the body. Anemia was very marked, puffing cedema was noticeable in the extremities, slight hemor-

rhages occurred from the gums, nose and bowels. All the symptoms grew gradually worse, till death, which occurred three months after the first appearance of the disease. The autopsy showed the cadaver to be quite bloodless, with serous effusions into the brain cavities, but no other noticeable brain lesion. Limbs and face quite dropsical. Kidney and liver healthy. Open-air exercise and stimulants were the only remedies this man could be induced to use.

CASE II.—Male, aged 44 years, had served a number of years in prison before reception here. History was very similar to Case I. He was a masturbator, became insane, avoided meat, etc., and was before death at least one-fourth covered with the purpuric spots, would not take medicine. Died after four months of the disease and autopsy revealed same condition as found in Case I.

CASE III.—Female, aged 26 years, single. This case occurred in private practice. A young lady, in affluent circumstances, had been an excellent specimen of perfect health and womanhood. Previous to this attack, she had nursed a near relative through a long siege of Bright's disease, during which she was closely confined to the house. She had irregular meals and sleep, and was quite tired out. She ate but sparingly of meats for some weeks, and for six weeks previous to the attack did not eat any meat at all. After the death of her charge she did not recuperate well, complaining most of general weakness and exhaustion. She was pale, but had not lost much weight, though her flesh had become flabby. At this time she began feeling quite badly, and expressed herself as having caught a general bad cold, but knew of no indiscretion or exposure to account for it. She kept her bed, and full doses of quinia following a stimulant to the biliary secretions were administered. Temp., 102 $\frac{1}{2}$; pulse, 128. This continued with little change for four days, when a profuse crop of purpuric spots appeared. During their development there was much nervous weakness and excitement, fever, rapid pulse, and loss of appetite. The cessation of the appearance of the first crop was followed by a general improvement in temperature, pulse and in the feeling of the patient. Iron, quinia, strychnia, phosphoric acid, light wines, massage and general faradization, constituted the treatment. A rheumatic element in the disease rapidly developed and a new crop of purpuric spots appeared every few days. Proper diet was most carefully looked after. She gradually grew worse by relapses, and in a month was in a very low condition indeed. At

that time, during temporary improvement, she was removed to the sea-shore for a couple of weeks, but did not seem to gain much. After her return home she slowly improved, the crop of purpuric spots being farther apart and smaller. After four months the menstrual functions became re-established, and at present writing, after five months, she is almost cured. The same treatment was pursued in Cases IV, V, VI, VII, VIII, IX and X. They are all convicts and were treated with the same medicinal remedies as were used in Case III. Cures resulted in all in from three to six months, except in case VII, in whom the anemia was very marked for fully a year. The foregoing convict cases all occurred during 1886. In the present spring a selected series of cases of phthisis were placed under treatment by Bergeon's method of gaseous enemata. We noticed that one of our worst cases of phthisis had a purpuric spotting, covering both limbs and thighs and that it improved very noticeably from the beginning of gaseous enemata. This led us to select some cases of purpura then in the prison and to place them under the treatment by gaseous enemata. Of the six cases we report, three were free from other diseases. In all, the improvement was immediate, marked, and rapid. Two are entirely cured of the purpura after four weeks' treatment: one of these was a consumptive and one was without any other complicating disease.

CASE XI.—Aged 32 years, white, male. The purpuric spots appeared on this man about April 15, being very thickly distributed over the arms, thighs and legs, and penis. He had none on the trunk. They varied in size from that of a pin-head up to half a dollar. It was the first attack of the disease he has had. It produced systemic disturbances; he had headache, felt languid and lost his appetite. He did not care for meats, and rarely ate any. The cervical glands were swollen. The gas treatment was commenced June 11 for phthisis, and is still being used. He has had no other treatment for the purpura. He has wonderfully improved in every way. The purpura has been entirely cured.

CASE XII.—White, male, aged 33 years. The disease commenced about five weeks ago, and was most marked about the ankles, and extended from this articulation up the legs for about five or six inches. The extravasations had coalesced and the ankles were of the color of claret, very painful and much swollen, and the hemorrhagic spots indurated. There was no general effect, the patient feeling well, though standing on his feet caused pain. He has enlarged cervical

glands, does not eat much meat, was taking tincture of chloride of iron, which did not benefit him. He was put on gas treatment, and is improving fast and will probably soon be well. The swelling has disappeared, and all the extravasated blood has been absorbed.

CASE XIII.—White, male, aged 44 years. This was his first attack, and began about May 1; he had loss of appetite, languor and headache, and said he felt very badly all over. The cervical glands were enlarged. He was put on Fowler's Solution, and said that he grew worse under it. He cannot eat meat. The general effect of the disease was well marked in this case. It was about five days before the patient could retain the gas. The ankles were greatly swollen and indurated and the hemorrhagic patches entirely covered them. They were of purplish color. Under the gas treatment for about a month he has improved in every way, looks better and feels better. The swelling in the lower extremities has disappeared, and the blood has been absorbed, leaving only some of the coloring matter.

CASE XIV.—White, male, aged 22. Has enlarged glands in the groin, is in very poor condition generally, and would never take much gas, claiming that he could not hold it. It is his first attack of purpura, and extends over the whole body excepting the hands, face and feet; and it is of the variety known as purpura papulosa or the small papules, round the hair follicles. He does not eat meat and has had no treatment but gas. He has not improved much.

CASE XV.—White, male, aged 22. Has had purpura about three months, this being his first attack. Cervical glands are greatly hypertrophied, and he has rheumatism badly. The purpuric spots were on the legs in large numbers and were about one-fourth of an inch in diameter; also one large extravasation on the inside of the thigh, about four inches long and two and a half wide. He says he is not much of a meat-eater. Under gas treatment his purpura has been cured and his general health greatly improved.

CASE XVI.—Aged 29 years. The present is the fourth attack of purpura in two years, and commenced about April 1 of the present year. It began with headache, languor and general malaise. The purpura is very extensive and there has been no improvement until the commencement of the gas treatment. The spots are large and numerous. No enlarged glands. Previous attacks were cured by long continued course of tonic treatment. He for years has avoided meat in his food. He is rapidly improving with the gas.

PURPURA HÆMORRHAGICA AS A COMPLICATION.

BY ENOS T. BLACKWELL, M. D., OF CEDAR-
VILLE, N. J.

It is a fortunate circumstance that thoughtful physicians, on witnessing complications of disease which are unfamiliar from their rarity, send their description to medical journals for their submission to the profession in general.

Dr. Nefe, of Whetstone, O., has done a meritorious service by publishing an account of purpura as a sequel of pneumonia. While this is quite unique, authors tell us that "there is no form of disease with which pneumonia may not be associated, especially when the powers of resistance have been enfeebled by previous illness."¹

Dr. N. has intimated a desire "to see such cases written upon, so that we may know what has been tried and with what success."

The description and treatment of purpura hemorrhagica are given, I suppose, by most systematic medical authors. Drs. Watson and Flint each give it a short notice; and excellent portrayals of it are to be found in "Wood's Practice of Medicine," and in "Wilson on the Skin." "The Handbook of Diseases of the Skin," edited by Von Ziemssen,² gives perhaps the best statement, and embodies the most recent observations. The causes, characteristics and treatment are given with more or less fullness by each. In a recent case treated by me, the purpura was clearly a result of the degeneration of the blood. The disorder in which it was an incident appeared to be a relapsing peritonitis, adynamic in its character, and having many aspects of infectious fever. The petechiæ, which appeared about the shins, at the close of the illness, were of a clear violet color, without perceptible elevation, and about one line in diameter.

It is a pity that so clever an observer as Dr. Nefe should speak of his case as "cerebral pneumonia." As the brain symptoms were doubtless the result of elevated temperature, which is incidental to the disease, it seems unnecessary to burden nomenclature with this additional title. The inscription of Professor Pepper's paper in the first number of the present volume of the REPORTER affords a valuable hint in this direction. In addition are these prominent remarks by Juergensen:

¹ Juergensen: art. croupous pneumonia. Ziemssen's Cyclopædia. Vol. v. 106.

² New York: Wm. Wood & Co.

gensen: "It would be difficult to assign any reason why these symptoms, which are common to all febrile conditions, should be ascribed in pneumonia to any other cause than the fever. And yet some have distinguished one form of pneumonia as 'cerebral,' 'meningitic,' etc., on account of the strong predominance of the cerebral symptoms . . . the brain symptoms depend essentially on the fever.

Again: "We might as well deny that alcohol will intoxicate, as reject the evidence that an increase of temperature will produce cerebral symptoms."

WOUND OF PERINEUM AND URETHRA; RETENTION OF URINE; TRAUMATIC STRICTURE; ASPIRATION OF BLADDER; RECOVERY.

BY O. L. ABBEY, M. D., OF WATERFORD, PA.

H. L., aged 13 years, of Union City, Pa., in 1879 was thrown over the head of a horse, and the horse jumping over him, struck him with one foot at the attachment of the scrotum to the perineum, making a bad wound.

Five hours later I attempted to empty the bladder with a catheter, but did not succeed. The next forenoon, with the assistance of Dr. Sherwood, I chloroformed the boy, after we had each tried in vain to introduce a catheter; but even when he was under the anæsthetic we had no better success. In the afternoon it became evident that the bladder must be relieved. So I procured an aspirator, and in the evening I aspirated the bladder and drew out the urine. I used a Peaslee's aspirator, and blistered my hands in the operation. I aspirated the bladder for two succeeding days.

The fourth night after the injury, a fistulous opening formed in the urethra at the seat of the wound, and the urine dribbled through it and emptied the bladder. A traumatic stricture was formed, through which we were unable to pass the smallest catheter of any kind. All of the urine ran away through the fistulous opening as fast as it was secreted.

The opinion of some of the oldest and best surgeons of the county was solicited. One recommended crowding a small silver catheter into the bladder and letting it remain, hoping the wound would heal over it. In the meantime the swelling was subsiding,

² Ziemssen's Cyclopædia. V. 106, 102.

and with the opinion of Dr. Sherwood coinciding, I concluded that I would wait and not interfere until we were obliged to. I also had the opinion of Dr. Bonsteel, of Corry, to that effect.

After the swelling was gone and the wound was nearly healed, I discovered that the bladder retained the urine for awhile, and when the boy urinated, a little passed the whole length of the urethra. The fistula finally closed entirely, and the urine seemed to act upon the stricture as a dilator. The young man has never had any trouble with it since.

Twenty-three years ago I lost a patient with acute inflammation of the prostate gland, who, I think, might have been saved by aspirating the bladder.

NOTE ON THE USE OF ANTIPYRIN IN THERMIC FEVER.

BY MORRIS J. LEWIS, M. D.,

Physician to the Episcopal and the Children's Hospitals, Philadelphia.

In antipyrin we possess a very valuable addition to our means of treating thermic fever. This should be given hypodermatically in simple solution, as follows:

R Antipyrin..... 3 ij
Aq. dest.q.s. .ad.....f 3 ss
M.

m. xx of this solution contains about gr. x of antipyrin; and this amount, or in severe cases double the quantity, should be injected beneath the skin as soon as it is possible to do so. This solution should be kept on hand during the heated term by all those who may be likely to be called upon to treat heat-stroke, for by the timely administration of this drug lives may be saved that otherwise would be lost; for much time is often lost in conveying the patient to a place of safety. This applies especially to patients before they are taken to the hospitals.

A very small vial may be carried in the pocket with the syringe, holding a sufficient quantity for any emergency.

Compressed tablets of 5 or 10 grains could easily be prepared, and readily dissolved in a few moments in water.

The hypodermic use of this drug is far preferable to its internal use, even if the patient should be able to swallow, or to its use by injection into the bowel as reported by Dr. Orville Horwitz, (Transactions of the College of Physicians, 1885), on account of the greater certainty of its speedy action. The possible danger of collapse after its free use

should be borne in mind, but the immediate great danger of the hyperpyrexia far outweighs this possibility.

As soon as possible the treatment by the bath, wet pack or rubbing with ice, should be employed, as it will not do to trust to antipyrin alone; although subsequent injections should be given should the temperature not show signs of falling, or should there be a decided rise after the temperature has been reduced by other means. This drug should be considered as a most valuable adjuvant to the ordinary treatment to be mainly relied upon.

Antifebrin can not be used in this way on account of its insolubility.

A SIMPLE WAY TO APPLY FLUIDS TO THE NASAL CAVITY.

BY CHARLES W. DULLES, M. D.,
OF PHILADELPHIA.

In practice it is sometimes far from easy to make application of fluids to the inside of the nose and the posterior nares. Douches are not quite safe, because the fluids are sometimes forced into the Eustachian tube, and set up an inflammation of the middle ear. On the other hand, it is very hard to teach patients how to draw a fluid up into the nose without producing strangling or coughing.

A way which I have found very successful is the following: Take a test tube about four inches long and half an inch wide, and place in it the solution to be used. Open the mouth and breath through it. Put the open end of the tube into one nostril, catching the rim against the ala so as to make a good fit. Then bend the head back, and raise the closed end of the tube, so as to *pour* the fluid into the nostril. All the while keep breathing through the mouth. The fluid will now run into the nose, pass back to the naso-pharynx, and can be made to go around behind the septum and on top of the soft palate, and come out of the opposite nostril. By moving the head about in various directions, the fluid can be made to reach any point in the nares, in front or behind, and to remain in contact with it as long as may be desired.

Any one who will try it will be surprised to find how thoroughly and easily this can be done.

Of course, all fluid applications to the nares must be well warmed and of a proper specific gravity. If, for example, Dobell's Solution be warmed to about 100° (Fahr.),

and used in this way, it will be found a most soothing application. The quantity to be used may easily be as much as such a test tube as I have referred to will contain. And it may be filled several times and used again and again at a single sitting.

The method just described may not be new to others, but it is new to me; and I publish it for the benefit of those who are not acquainted with it.

HOSPITAL NOTES.

MEDICAL DISPENSARY OF THE UNIVERSITY OF PENNSYLVANIA.

Chronic Rheumatism—Treatment by Tonics.

Reported by M. HOWARD FUSSELL, M. D.

Mary F., age 32, married, good family history and habits, presented herself at the Dispensary, August 19, 1885, with the following history:

Three years previously, had a prolonged attack of chills and fever; two years previously, suddenly attacked with severe pain and swelling of almost all the smaller joints, especially of the fingers and toes. This resisted treatment, and the ailment gradually involved the larger joints.

At the time of her appearance at the University, she was almost helpless, owing to the extreme pain and swelling in the great number of joints, large and small. She was pale, emaciated, and the picture of distress; appetite poor.

She was immediately put on an emulsion of cod liver oil and syr. of hypophos. of lime, with a mixture of iron and arsenic: tr. ferri chlor., f ʒj; liq. arsen. chlor. f ʒss. 15 drops t. d.

She returned in a week, better. The treatment was continued without alteration until October 15, 1885; at that time she expressed herself better than she had been since the beginning of her illness.

She made frequent visits to the dispensary for one year; for the greater part of the time the oil was taken, but the arsenic was discontinued after four months' use.

At the present writing she has scarcely any pain, is able to do her housework, has good appetite, and looks the picture of health. Save for occasional outbreaks of the trouble in the phalangeal joints, she would consider herself entirely cured.

This is a striking example of a large number of cases that yearly present themselves at the hospital. They are all classed under the comprehensive title, chronic rheumatism.

Many have gone the rounds of doctors and dispensaries, have received ounces of iodides and salicylates, but no permanent relief. Many are in need of tonics, such as those used in the case reported, and will recover without a single (strictly speaking) anti-rheumatic remedy.

Build up the strength of the patient, and nature will take care of the rheumatism.

SOCIETY REPORTS.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, Tuesday, July 5, 1887.

— The President, W. T. BELFIELD, M.D., in the chair.

DR. E. WESTON reported

"Cases of Synovitis of the Knee Joint."

Synovitis, though a surgical disease, is one which the general practitioner often treats—is often compelled to, if he have a country practice—and there is no reason why he should not treat it well and successfully.

A slight synovitis may recover rapidly without treatment, and so these cases get well when treated with a poultice, or when painted with tincture of iodine. But the physician who makes this his routine practice will not have many "flattering successes," and the number of cripples in his neighborhood may be monuments to his want of thoughtful attention.

I have four cases of synovitis of the knee to report. Not that they present points of peculiar interest, but to emphasize their importance, even though I disclose my own mistakes in doing so:

CASE I.—A. B., Irish, aged about 50, laborer. I met him on the street Jan. 1, 1885, when he told me he had pain in his left knee; that he did not know of injuring it in any way. Having a physician's dislike for using "all out doors" for his office, and being consulted wherever he chanced to meet a would-be patient, I gave the man little attention, and advice of a very general nature. One week later he sent for me. I found him in bed suffering severe pain, knee distended with fluid in joint cavity, leg flexed. He refused to have the fluid evacuated, or even to have his leg put on a splint, although I told him plainly of the probable consequences of not doing so. Then instead of leaving the case, I allowed him to be his own physician, while I continued to make daily visits and suggestions.

I have no full notes of the case, but it went from bad to worse. Abscesses formed in the thigh, which were opened as they developed, drainage tubes were passed in various directions, the limb becoming honey-combed by the burrowing pus. The cavities were frequently syringed with carbolyzed water and the limb kept on a pillow of oakum. He was given a nourishing diet, with stimulants and tonics. But he gradually lost flesh and strength, his temperature increased, and on the 1st of March he died of sepsis and exhaustion.

CASE II.—C. D., American, aged about 45, by profession a lawyer. I saw him first March 4, 1886, when he told me his left knee had pained him quite constantly, but not very severely, for about ten days. He thought he had taken cold in it while sitting at his desk, under which he had felt a draught. I found the knee moderately enlarged, the joint distended with fluid, and hot and painful. I ordered him to bed, and had an anodyne liniment and warm fomentation applied.

This treatment was continued for three days without benefit, when I opened the synovial cavity with a bistoury and evacuated about eight ounces of light straw-colored, probably nearly normal, synovial fluid. He was at once relieved of pain. The limb was put on a well-padded posterior splint, and an elastic bandage was applied. The fluid gradually reaccumulated, and in four days the joint was again full, hot and painful. I now aspirated it, and reapplied the bandage. There was again a slight filling, but not sufficient to necessitate opening. The patient steadily improved, and in a few weeks had perfect use of the joint.

CASE III.—E. F., a Swede, aged 25, painter. Feb. 19, 1886, at noon, while on his way to work he fell, striking his right knee on the ice. It caused him severe pain for a short time, but he worked the whole afternoon, standing on a step ladder, without much discomfort. At night the knee began to swell and pain him intensely. When I saw him the knee was hot, very painful, and moderately distended, and the leg was flexed. A liniment composed of opium, aconite and menthol was applied, with warm fomentation, and opium was given internally. No improvement taking place, and the joint becoming much distended, on the 22nd inst. I opened it with a bistoury, letting out a large quantity of blood-colored fluid. He was at once relieved of his intense pain. He made a steady recovery, and in about two months had perfect use of the joint.

CASE IV.—S. H., aged 38, a carpenter. He had been at work on the outside of a building most of the winter, and of late had been obliged to kneel on scaffolding a good deal. When I saw him on Feb. 3d, he told me his left knee had been painful and getting stiff for some time. It was then painful, and contained a small amount of fluid. I could not convince him of the importance of giving it rest. I saw him occasionally during the following weeks, during which he was working about and simply using a liniment. On Feb. 11, the condition of the knee being decidedly worse, I told him unless he was willing to give me absolute control of the case, I should do nothing more for him. He was unwilling to submit, and I did not see him again for four days, when he sent for me. The joint was now moderately distended, and the patella floating. I applied a posterior splint and elastic bandage, and the patient went to bed. Three days later, the joint being very full, I opened it with a bistoury, letting out a quantity of apparently unchanged synovial fluid. Immediate relief followed, and the bandage was reapplied. The patient was given quinine and iodide of iron, and the kidneys and bowels were kept active. But the improvement was not permanent. The joint slowly refilled; and in three weeks it became necessary to evacuate it. This time I used the aspirator, and an accident happened which I am quite sure will not occur to me again. Being ready to introduce the needle, I asked my friend, who was assisting—a most careful and intelligent physician—to exhaust the aspirator bottle. All being ready, I passed the needle into the tissues until the opening near the joint disappeared, when I requested my assistant to turn the stop-cock, and as he did so I thrust the needle into the cavity of the joint. I was startled by a shriek of pain; and I have rarely seen such an agonized expression on any face. The muscles of the leg instantly became rigid and prominent, and the joint increased in size, but no fluid appeared. Fortunately the probable cause of the trouble at once occurred to me. The bottle had not been exhausted, but filled with compressed air. The needle was withdrawn, the aspirator made ready and the fluid evacuated as intended. The air which had been driven into the joint bubbled out with the liquid. But the cellular tissue of the thigh contained air which could be felt for two weeks, by which time it had disappeared, leaving no ill effects. Apparently the joint was not injured by its forcible distension, though in four days it had become filled again, and I

withdrew with the aspirator fluid of the same appearance as before. In just one week, the other knee having become similarly involved, and the joint cavity very full, I aspirated it. From this time the patient steadily improved, and he made a perfect recovery.

I have intentionally omitted to speak of the anatomy of the knee, or of the pathology, diagnosis and classification of the cases I have briefly reported. But it would seem proper to treat them by pressure, absolute rest, and early, and if necessary repeated evacuations. Barwell, whose reputation in the treatment of diseases of the joints is certainly second to no man's, says: "If the inflammation be sufficient to cause considerable secretion into the joint, producing marked fullness of the sac, the synovial membrane should be punctured * * * to relieve the tension."

Howard Marsh, in his work on "Diseases of the Joints," says: "It is now well known that matter, whether connected with acute or chronic arthritis, may be safely evacuated, with the result that the severe suffering, the prolonged fever, the wide and destructive burrowing, and the formation of sinuses, which were the common rule only a few years ago, can be generally avoided."

DR. G. J. TOBIAS: I think the paper is a very good one and the cases reported interesting. The doctor states that in two cases he made an incision before he aspirated; I would ask why he did it, why not try the aspirator first? The accident spoken of has occurred before in this city, that of compressing the air in the bottle, instead of pumping it out and producing a vacuum, thereby causing compressed air to be forced into the joint cavity with some times most serious results. Would it not be a good plan to have some basin or small receptacle at hand containing water, to try the aspirator first and see that it is in proper working order? I wish he would also tell us more fully how he used the posterior splint and whether he padded it, the material used for bandage, etc.

THE PRESIDENT: I take it for granted that Dr. Weston took the ordinary cleanly and antiseptic precautions before incising the knee-joint. Most of us would be inclined to use the aspirator before making an incision, since it is a common observation that after the knee-joint has been aspirated once, twice, three times or more, resolution has occurred and the functions of the joint resumed even when the fluid was purulent. The accident in the use of the aspirator reminds me of one of which I am personally aware as occurring in this city, and which had a more unfortu-

nate termination than in Dr. Weston's case, where most of the air got into the tissue outside of the joint. In the case to which I refer the stop-cork was not turned until the needle had entered the joint, and in three minutes the patient was dead.

DR. E. B. WESTON, in closing the discussion, said: I used the bistoury instead of the aspirator because it was more convenient at that time. The bistoury has been used a good many times; but I don't pretend to say it is better, perhaps it is not so good; but in my case it was a matter of convenience. The cases did well. The posterior splint was well padded with cotton. I used for the splint, heavy sole leather. An elastic bandage, or rather a flannel bandage, was used below the knee and on the thigh, and a rubber bandage to make the pressure over the knee-joint. Of course the aspirator should have been tested. The mistake should not have occurred. And yet no injury was done by the violent distension of the joint, or by the air which entered it.

DR. WILLIAM T. BELFIELD reported

A Case of Mercurial Necrosis, with Specimen.

The case of mercurial necrosis which I wish to mention is that of a young man, apparently in excellent health, who seven years ago contracted a chancre, which was followed by the usual symptoms of constitutional syphilis. He was treated by a regular physician in an eastern city, and for a year and a half had the usual history of a healthy man contracting syphilis—mucus patches, occasional rashes on the skin, etc. After about two and a half years, during which time he was under constant observation, and much of the time taking medicine, he had no further indication of constitutional syphilis. It went along that way for about four years. Over six years after the contraction of the chancre, he noticed a slight lump on the instep of the left foot which gave a little pain when he wore tight shoes. Fearing this might be an indication of the return of the disease, he went to his physician who prescribed syphilitic treatment. He ordered the young man to take a pill of one-fourth grain of yellow oxide of mercury three times a day. The patient, who was naturally anxious to overcome any taint that might remain in him, followed the direction faithfully, and for six months took one of these pills three times a day. At the end of this time his mouth became sore. About ten days after he first noticed the soreness of the mouth, being then in Chicago, he was directed to see me. At that time his gums were quite soft and spongy,

his teeth felt loose and he could not bite bread with any comfort. On the left side the alveolar process of the upper jaw was exposed for about three-fourth of an inch in length and one-half inch in vertical breadth. The three molar teeth in that portion of the jaw were decidedly loose. The hard palate corresponding to that part of the alveolar process was swollen, and there were the usual symptoms of subacute periostitis. He was merely ordered to discontinue the mercury, to use a simple mouth wash and to take iodide of potassium. In the course of ten days the portion of the jaw exposed was so loose that it could have been removed without much difficulty, but the patient, finching from the slight pain this would cause, declined to have it removed and worked at it with his fingers until three weeks after I first saw him, he pulled the piece away. In the meantime he had lost three sound molar teeth. The piece is quite small, only large enough for the insertion of the three teeth, but it is of some interest. The upper surface of it is the floor of the antrum. During a part of the time, the cheek bone was swollen and tender; but no abscess formed.

It may be questioned whether this necrosis was mercurial or syphilitic. The man unquestionably had syphilis seven years ago, but a little consideration shows that this necrosis was not syphilitic. In the first place, for four and a half years he has had no indication of syphilis; the little hardening of the instep, for which he took the mercury, still persists and is evidently not of syphilitic origin; furthermore, there was thickening and softening of the gums and loosening of the teeth, which was due to the mercury; and, lastly, while syphilis may cause necrosis of the long bones and of many other bones in the body, yet it rarely causes necrosis of the inferior and superior maxillary; while mercury causes necrosis in these bones with especial frequency.

Dr. Belfield said, in reply to a question that the patient had not been salivated during the time of treatment so far as could be remembered.

DR. JOSEPH HAVEN exhibited

A Mechanical Support for Maintaining the Lithotomy Position.

The position most favorable for the majority of the operations on or about the perineum is that which is known as the lithotomy position: the patient prone upon the back, thighs sharply flexed on the abdomen, knees separated. For the patient to maintain this position unaided, is a difficult pro-

cedure, and when under an anæsthetic an absolute impossibility. Hence the necessity for assistance in some form. The usual custom is to intrust each limb to an assistant to hold during the operation. To this procedure there are some objections.

First, it increases the necessary number of assistants by at least two. Usually the patient, if not the whole household, is dreading the operation with nervous anxiety, and the sight of a number of assistants or an unnecessary display of paraphernalia does not tend to quiet their fears or relieve their anxiety. Hence operations at the house should be conducted with as little display as possible.

Again, any one who has assisted in holding a patient in the lithotomy position for an hour or so, knows that it is a tiresome undertaking.

Again, emergencies are continually arising where the assistants are called upon to render other assistance, as from their proximity to the operator they are in the way of others, and are called upon to pass instruments, wash sponges, etc., thereby neglecting their own work, and the falling of the patient's foot in the operator's lap does not tend to better the results of the operation or improve the temper of the operator. Consequently, it is not strange that various appliances should have been improvised by which the patient could be held in the proper position.

My attention was first called to this subject some six or eight years ago. The operation was for the closing of a lacerated cervix. The operator brought with him an apparatus made of three boards, about four feet long, joined on the sides by hinges. When the side pieces were raised and fastened by hooks the whole formed a sort of trough in which the patient was placed and a harness arrangement bound each limb to the corresponding side piece. While the apparatus worked well upon this occasion, there are objections to it.

In the first place, it required too long a time to extricate the patient from the apparatus.

Secondly, the effect of putting together such a contrivance in the sick room might be similar to the building of a scaffold in the presence of the condemned.

Thirdly, blood stains are not easily removed from wood, and should there be any septic influence in the case, this would be readily absorbed in the pores of the wood; and I doubt the advisability of using a wooden apparatus in repeated operations in close proximity to open wounds.

In a work entitled "Minor Surgical Gynecology," by Dr. Paul Mundé, the author speaks favorably of an apparatus designed by Dr. Hamilton, of Harrisburg, Pa., which he styles "Hamilton's Gynapod." This consists of a piece of wood upon which the buttocks rest; from this arises on either side an arm surmounted by a crutch which supports the knee. While being more simple than the apparatus previously described, some of the same objections hold good in this case. Again, as the limbs are not fastened in any way, it allows too much freedom to the feet. This will be particularly annoying if the operation be a trivial one, not requiring the administration of an anæsthetic.

If then an apparatus for this purpose is of service in these operations, what are the essential requirements?

First—It should be so constructed that it can be instantly removed, if emergency should arise.

Second—It should be of a material which will admit of its being thoroughly cleansed and disinfected.

Third—It should secure the patient firmly, and at the same time be as simple, light and easy of transportation as possible.

Acting upon these thoughts, I had made, two years ago, an apparatus based upon the same principle as the one which I shall show you this evening, namely, a light nickel plated bar provided with a hinge in the center, allowing it to be folded up when not in use. This bar passes under the knees of the patient, holding them flexed on the abdomen by means of a band of webbing which passes around the shoulders of the patient; the webbing having a strap and buckle allowing the band to lengthen or shorten according to the size of the patient. Bands of the same material at either end of the rod securely hold the limbs below the knee; every strap being attached to the rod by means of a snap catch, which can be instantly disengaged if occasion so demands. A rod attachment for holding a fountain syringe completes the outfit. The whole apparatus when not in use fits into a case eighteen inches long, five inches deep and four inches wide.

In this connection it becomes my duty, and at the same time at pleasure, to accord to Thomas B. McBride, of Philadelphia, the credit of having within the last few months devised an apparatus somewhat similar in principle to the one just described. A description of his apparatus will be found in the MEDICAL AND SURGICAL REPORTER for June 4, 1887. He writes me that he has, since

that publication, added the hinge, thereby lessening the length of the apparatus when not in use.

In conclusion, I will add that I have found the apparatus serviceable in all operations in which the lithotomy position is indicated, and particularly when operating for slight lacerations of the cervix where no anæsthetic was administered.

THE PRESIDENT asked Dr. Haven if the apparatus answered as well when the patient was under an anæsthetic.

DR. JOSEPH HAVEN: It answers better. I have used the apparatus a number of times with an anæsthetic, and several other physicians have used it. The patient is liable to come out of ether before the operation is finished, and with this apparatus she cannot do herself any harm during the operation.

DR. TOBIAS asked Dr. Haven in how many cases of laceration of the cervix he had tried the apparatus, and if the patient ever raised any objection to its use.

DR. HAVEN: Probably twelve or fifteen. No objection has been made to the apparatus, except in one case. But you will find that some patients object to any instrument. This patient asked me what it was, and when I explained that it was not an instrument of torture, she readily consented to its use. However, where an anæsthetic is to be given, I do not usually put it on until the patients are anæsthetized, and they do not see the instrument at all. It can be put on in less than one minute, and taken off in the same time. I very often use it in dressing wounds around the uterus, packing the vagina after opening a pelvic abscess, where I do not care to employ an assistant to hold the patient in the lithotomy position, or for slight operations on the rectum,—anything that would not require an anæsthetic.

—THE RUSH MONUMENT.—The State Medical Society of California at the recent session in San Francisco, unanimously adopted resolutions heartily approving the project of erecting a statue of "the immortal Benjamin Rush," in the city of Washington, and requesting the various medical journals to call upon every physician in the State to contribute the very modest sum of one dollar each to which the subscription has been limited.

—M. Chevreul will be 101 years old in August. His family and friends intend to celebrate his birthday, but the old chemist desires that no public demonstration be made on the occasion.

EDITORIAL DEPARTMENT.

PERISCOPE.

Severe Injury in a Woman Pregnant with Twins.—Expulsion of one Fœtus at the End of Eighty Days.—Retention of the Other up to Full Term.

Dr. E. Sirois, in the July number of *L'Union Médicale du Canada*, reports the following case:

On the first of December last, I was called to Mrs. H., who, I was told, had just had a fall. The patient, who weighed about one hundred and ninety pounds, had fallen, head-first, from a wall ten or twelve feet high. When I saw her, a half-hour after the accident, she was bleeding at the nose and ears, and was delirious. In spite of all I could do, her condition grew worse, to such a degree that five hours later she was in profound coma, with complete insensibility, widely dilated pupils, paralysis of the bladder and rectum, labored respiration (from six to twelve in the minute); pulse thready, and very irregular, varying between one hundred and twenty and one hundred and sixty. I consulted with a brother practitioner, who believed that there was a severe lesion of the base of the brain, and declared that the woman would die. For my own part I had no idea but that she would die before morning. I, however, remained with her, pretending to be doing something, so as not to take away too suddenly what little hope remained to the sorrowful family. Toward the latter part of the night, eleven hours after the accident, the respiration became gradually more regular and less labored, while the pulse became stronger and remained at one hundred and thirty. At nine o'clock on the following morning (December 2) fourteen hours after the accident, she had completely recovered consciousness, but complained of intolerable pain in the head, neck and shoulders. I knew the patient was pregnant, but pains, which were present, were of a nature to distract attention from the uterus. On the tenth day she lost by the vagina about two ounces of blood, which were followed by the expulsion of a fœtus *without labor pains*. Then all her troubles disappeared. There was no more headache, no more pains in the limbs. Two days afterwards my patient was engaged in her ordinary duties. The ovum, which was expelled, was intact. I opened it myself and established the presence of a very well formed embryo about seventy or eighty days old. On the sixteenth of May, that is to say,

less than seven months after the accident, Mrs. H. gave birth to a boy at term, weighing ten and one half pounds. She had, therefore, at the time of the accident, lost the half of a double conception.

The Relation of Uric Acid Excretion to Headache.

Headache is a disorder to which physicians are perhaps even more prone than the majority of their patients, and one would suppose that they would be particularly interested in the subject. But it is not often that the matter receives very exhaustive treatment in medical writings, and the monograph of Dr. W. H. Day, published some years ago, is perhaps the latest which has appeared on the subject.

At a recent meeting of the Royal Medical and Chirurgical Society of London, Dr. Alexander Haig presented a paper on headache, which contained some interesting suggestions. Considering that headache has frequently some clinical relationship to gout, the author has examined the urine with a view of deciding the question. A headache was experimentally produced on himself by adopting a diet of meat and cheese. The urine excreted during the headache was kept separate from that excreted before and after. There appeared to be retention of uric acid before the headache, excessive excretion during the headache, and diminished excretion after the headache. Taking the three periods, however, and comparing the urines, there was no absolute excess of uric acid passed. The temporary excess during the headache was balanced by the diminution before and after. There was little change in the amount of urea passed during a headache, but the relation of the uric acid to the urea was greatly altered. When, after excessive exercise, there was a large excretion of urea and uric acid (though in their normal relation), headache was not far off; and if from any cause the uric-acid excretion fluctuated, headache would be present during its excess and absent during its diminution.

This fluctuation in the uric acid excreted did not affect the urea, and it was merely temporary and transient; it has also been proved that urates may accumulate while the kidneys are quite sound. Dr. Haig suggested that diminished alkalescence of the blood best explained all this. Gout, he thought, might consist in a diminished power of forming ammonia to neutralize

acids, resulting in a permanent diminution of the alkalescence of the blood. A dose of acid, either from without or formed internally, might cause temporary retention of uric acid and so lead to headache.

Probably, however, as the author suggested, retention does not explain everything, as in his case the excess during the headache appeared to exceed the previous retention. There may be temporary excessive formation as well; hence the good effect of sodium salicylate, which lessens the formation of uric acid. The beneficial effects on this form of headache of a good meal, vegetarian diet, and alkalies were severally due to a temporary increase in the alkalescence of the blood.

On the Treatment of Lupus by Scraping.

Mr. Rushton Parker, Professor of Surgery in University College, Liverpool, writes, in the *British Medical Journal*:

The practice of scraping with a sharp spoon, or other convenient instrument too blunt to cut healthy tissues easily, has proved of such conspicuous advantage in the treatment of unhealthy granulating surfaces as to be hardly capable of exaggeration, though its general utility is too well-known to need much advocacy. Though cases of lupus vulgaris and all forms of strumous or otherwise indolent flabby ulcer yield better, in my opinion, to scraping than to any other treatment, their alternative curability by caustics, whether incandescent or chemical, is perfectly known. Various methods lead to healing in cases of lupus; the principle that underlies is removal of the morbid stuff from the tissues it keeps unhealed, whether this be by dissection, scraping, or burning *in situ*.

The worst specimens of ulcerating lupus readily heal after thorough scraping once or oftener; also the less evident cases of lupus erythematosus, and others of dry scabby lupus that are neither erythematous nor serpiginous, but none the less ulcerative, after an indolent fashion; and other cases, again, that are warty in some parts, pustular in others, and are not at first conspicuously recognizable as forms of lupus at all. Although lupus most commonly affects the young, and women more than men, we meet it at any age over ten, in both sexes; and when, as I have seen, it affects the hands, arms and neck of a man aged 58 in such an untypical form as scattered pustules and warty patches, the disease is apt to be neglected, overlooked, or unrecognized, on account of its apparent slightness. Such a case, twelve months un-

healed, I treated by scraping with a blunt knife, repeated once or twice a week as fresh tubercles appeared, finally healing in three weeks.

The instruments I have resorted to, on the spur of the moment, for scraping lupus on a small scale, are a straight shoemaker's awl, and even a pointed wooden lucifer match, the point of a tooth-elevator, a gum-lancet, or a broad eye-spud, suitably blunted, so as not to cut healthy tissues. This last I have used more frequently than anything else for the small pustular, pearly or miliary nodules one meets with as recurrences in cases requiring repeated operation, and as first manifestations in some of the more obscure varieties, and for lupus erythematous, of which I have had a conspicuous example in hand for the last two years. In that period scraping has been done seventeen times, at intervals of from twelve days to three months, in a woman aged 35. The disease has lasted fourteen years, during the last ten of which I have frequently seen her. Some years ago her cheeks and nose were bright red, under a whole cuticle, and raised. She had been several times apparently nearly cured, after repeated cauterizations with a fine heated point, but never got quite well. A very steady improvement has taken place under the scraping, which has sometimes to be applied to minute miliary nodules no bigger than a millet-seed. For hæmostatic purposes I use a wire ring, set at an obtuse angle, mounted in a handle, and pressed firmly round the spot operated on; and, as soon as the scraping is done, solid nitrate of silver, rubbed into the raw surface. This effectually arrests or prevents bleeding, and secures for a few days an aseptic scab. In more extensive cases, requiring the sharp spoon, nitrate of silver is similarly applied, followed by a dressing of boracic lint or sublimated gauze, wet, under waterproof tissue.

A year or two ago I used liquor calcis bisulphitis, a lotion that has been much praised for lupus and for the sores left after excision of rodent ulcer. But I have not been able to find in it anything more than a convenient antiseptic, neither better nor worse than others in everyday use. I gave it a good trial also as a subcuticular injection into the lupus growth last referred to, before resorting to scraping; but it proved quite useless. What I claim for scraping is its thorough removal of morbid granulations, without waste by destruction of adjacent healthy structures, and the accuracy with which it can be done when the part is rendered bloodless by ring pressure.

The Fluorides of Ammonium and Iron in Hypertrophy of the Spleen.

In the *Practitioner* for June, 1887, Dr. John Lucas presents a number of cases treated as above indicated. The time required to effect a reduction of the hypertrophied spleen to its normal size was about three months. He writes as follows regarding the details of treatment:

I prefer the salts to the acid, because they are less unstable. The ammonium fluoride (NH_4F) is prepared by saturating a solution of hydrofluoric acid (HF) with ammonia (NH_3), and allowing the mixture to evaporate over quick-lime. The fluoride of ammonium crystallizes in hexagonal prisms, dissolving readily in water, and the solution is colorless; but it acts on glass (for chemical reasons which I need not enter into here), going through it and escaping. To prevent this escape the expedient of coating the inside of the bottle with wax, so as to prevent the unstable compound in solution from coming in contact with glass, has to be resorted to; or the solution may be kept in india-rubber tubes or gutta-percha bottles. I adopted the first-named plan, and did not cause more of the solution to be made than was actually wanted for use. The strength of the solution employed by me was four grains to the ounce. Of this *liquor ammonii fluoridi* I began with 5-minim doses, diluted in an ounce of water and administered thrice a day after meals, and the dose after a day or two may be increased to 8 minims, then to 10, 12, 15, 18, 20, and so on at intervals of a few days, the increase being effected gradually and cautiously; the great point to attend to is to insure the taking of this medicine after food, as otherwise gastric and intestinal irritation will be set up, while with this precaution it will be found to be fairly well tolerated in the majority of cases.

Remarks.—Certain physiological effects, more or less common to all the cases, were observed. Briefly, there was a marked influence on the blood-pressure, which had a downward tendency at first; the pulse fluctuated and the number of beats was lessened. In this respect my experience was quite in accord with that of Dr. Coates. It was also found that the drug possessed antipyretic properties when the temperature ranged above the normal point, and it prevented attacks of ague, thus proving it to be an anti-periodic. Dr. Coates writes that he did not notice this action. In all the cases it produced nausea at first, though gradually a sort of tolerance appeared to have been

established, and the drug could be borne in much larger doses. It produces some intestinal irritation, probably acting more on the duodenum, and giving rise to some diarrhoea. I am not sure that it has any action as a hepatic stimulant. The appetite after a time improves under its use. Almost all the patients complained of a pricking or twisting pain or uneasiness in the spleen itself, the original pain being sometimes aggravated. When given carefully and after meals, which should be the invariable rule, it is better borne and does not produce nausea and purging to the same extent. It certainly seems to excel any other method of treatment with which we are acquainted. It is a new remedy in this connection, and I would solicit trial and report on it by physicians in this country as well as in India, and not only in the treatment of splenic hypertrophy, but also in that of goitre. Although I began with small (5-minim) doses, I should be disposed to start with 20 or even 30 minims diluted in an ounce or two of water and administered always after a meal. The combination of iron with hydrofluoric acid, I am inclined to think, would prove more valuable on account of the hæmatinic properties of the former, and because as an adjunct it would exercise its astringent and tonic influence on the mucous lining of the stomach and intestines, and thus in a great measure tend to counteract the unpleasant effects complained of, and perhaps also to augment the evident specific action of the spleen. The fluoride of quinine can easily be prepared, and so also can the triple fluoride of iron, quinine, and ammonium.

Oxygen Baths in Febrile Conditions.

A Spanish observer, Dr. F. Valenzuela, starting from M. Paul Bert's results showing the destructive action exerted by oxygen of high tension on vegetable and micro-organic life, has recently made a number of interesting observations on the power of an atmosphere of pure oxygen to affect the febrile state. He found that the temperature of healthy rabbits, after being kept for an hour in pure oxygen, at pressures of from 760 millimètres to 1,520 millimètres, underwent a marked diminution, amounting in the last case to as much as 11°F . Again, rabbits into which septic matter had been injected so as to induce pyrexia, suffered a decided diminution of the fever by immersion for one or two hours in an atmosphere of pure oxygen. In one experiment, where two rabbits were similarly injected, one, which was twice bathed in oxygen at a tension seven times as high as

that which it has in the atmosphere recovered, while the other, which was left untreated, died on the third day. Several observations were also made on hospital patients. Two cases of acute pneumonia, treated with oxygen "baths" at a pressure of 960 millimètres, ran a peculiarly rapid and favorable course. In a phthisical case with a temperature of 103.6° F. an oxygen "bath" brought the thermometer down to 101.3°. The next evening the temperature rose as before, and was again reduced in the same manner; slight hæmoptysis, however, was caused by the "bath." The next day there was no rise of temperature. After two days, a third "bath" was given, and from that time the febrile condition appeared to improve, for though the temperature sometimes rose above normal, the pyrexia was never so pronounced as it had been. From a second case of the same kind reported, there would seem to be a decided danger of these oxygen "baths" producing hæmoptysis. On the temperature, however, they appear to exert a very beneficial effect.—*Brit. Med. Journal.*

A Case of Intestinal Tuberculosis which had been Cured.

Under this caption, the *Allg. med. Central-Zeitung*, for June 11th, has the following interesting particulars: Dr. Hartwig made in December, 1885, a preliminary incision into a woman with marked ascites, in whom a positive diagnosis was not possible. There were about three-quarters of a bucketful of a clear pale liquid evacuated. The genital organs were unaltered, but the whole peritoneum was strewed with tubercles. Convalescence was without reaction. In a dissected piece of the peritoneum tubercle bacilli could be recognized with certainty.

One year after the operation, the patient had a blooming appearance and felt well. Ascites had not reappeared. Physical signs of pulmonary disease were not recognized.

A Brilliant Clinical Diagnosis.

In the *Centralblatt f. d. med. Wissensch.*, for June 11th, there is the following account of a case of acute endocarditis occurring in the practice of Spronck. He accurately describes the case, that of a patient twenty years old, which is especially interesting from its complications. With the endocarditis was insufficiency of the mitral, and subsequently an embolic aneurism of the superior mesenteric and right femoral developed. The autopsy of the case, which came to its

fatal termination through pulmonary phthisis, established the clinical diagnosis completely. The anatomical diagnosis runs as follows: tuberculosis of the lungs; acute vegetative endocarditis of the mitral valve, with insufficiency, and dilatation of the heart; arterial aneurism of the superior mesenteric and right femoral; embolism of the artery of the fissure of Sylvius of the left side; multiple infarcts of the spleen and kidneys. During life the difficult diagnosis of aneurism of the superior mesenteric could be established through a pulsating tumor in the epigastrium of the size of a hen's egg. The differential diagnosis (of epigastric pulsation, tumor pressing upon the aorta, aortic aneurism, aneurism of the coeliac axis) is satisfactorily cleared up.

Heat-Stroke at Assouan in 1886.

Under this heading Surgeon G. Douglas Hunter gives the following interesting accounts of the symptoms and treatment of thermic fever as observed in the tropics:

The usual type was as follows:—A man was carried in with flushed face, hot, dry, burning skin; if conscious, complaining of intense pain in the head; generally unconscious, pulse feeble, breathing shallow and labored; at times comatose, with stertorous breathing, in others violent convulsions relapsing into coma. The initial temperature generally varied from 104° to 107°; you could not depend on the strict accuracy of the clinical thermometer, owing to the high temperature of the external air, but the bodily temperature was always very high.

The cases occurring in patients in hospital presented similar symptoms, but were generally more insidious. Several cases exhibited a kind of premonitory stage, the patient being admitted to hospital with slight febrile disturbance, and after a day or two developed the disease in its full intensity.

In cases of enteric fever in which it occurred, it was either speedily fatal or seriously complicated the disease, the symptoms being high temperature, hot, dry, and burning skin, flushed face, and great prostration, which, if yielding to treatment, left the patient very weak and less fit to cope with the original disease.

In severe cases, in which the patient became comatose early, he usually died in a few hours without rallying. One or two cases rallied and then relapsed into coma. Case 6 was the longest case that terminated fatally. If the attack yielded to treatment the patient was left very prostrate, feverish, furred with tongue, headache, etc., which passed

off generally in a few days, and left him convalescent but weak and debilitated.

Most of the cases which recovered were considerably debilitated, and required change of climate; I am unaware if they suffered from brain mischief later on.

Treatment must be immediate and thorough. The patient should be stripped and laid in the coolest place possible—in the shade outside is best—and cold water dashed on the head and spine; this should be maintained; a large enema administered and the lower bowel well emptied. If the patient regains consciousness, he may then be placed on his bed (if the temperature remains high) in a wet pack, and ice kept to his head. Five grains of calomel may then be administered, and diaphoretics given frequently. To promote free action of the skin and maintain the action of the bowels is very needful. If a relapse threatens, douching should be at once resorted to. If there are no signs of rallying, use sinapisms to the heart, frequent douching, ice to head and spine, friction of the limbs; if the pulse is failing, brandy at frequent intervals in small doses and brandy enemata. If respiration is failing, artificial respiration should be employed and well kept up. On no account give up every attempt till life is quite extinct. On no account bleed the patient. The after treatment is to maintain free action of the skin and bowels—tonics and change of air to a temperate climate.

The essence of treatment is to reduce the bodily temperature as speedily as possible, and the surest way to do this is the application of cold water and ice; this should be maintained, and the least relapse dealt vigorously with in the same way. Immediate action of the bowels by enemata is very necessary, and an emetic is beneficial in suitable cases.—*British Medical Journal*, July 9, 1887.

The Relation of Erysipelas to Syphilis.

In the *Centrallblatt f. d. med. Wissensch.*, for June 18th, there is an abstract from a paper by Schuster under the above heading, which says: In a woman suffering from syphilis of the nasal passages a severe attack of erysipelas developed itself from a small wound at the border of the nostril from which the patient died. In another case there arose likewise a very grave repeated erysipelas in a man, during specific treatment for a latent state of syphilis; this did not hinder the later outbreak of the syphilitic ulcer.

In a third patient, syphilis of the nasal passages formed directly the point of origin of a many-times-repeated erysipelas, and with the cure of the first also disappeared. Upon these experiences, he considers erysipelas a serious complication of syphilis, and suspects a specific and permanently curative action of the former upon the latter.

Are Tumors Caused by Bacteria?

In *Schmidt's Jahrbücher* for June 15, 1887, occurs the following: M. M. Galippe et Landouzy, in *Gaz. des Hôp.*, 24. p. 158, 1887, say they have transferred small pieces of tissue from two uterine myomas, immediately after the operation, into different culture fluids, and found in two days pure masses of micro-organisms in the fluids. Sometimes they were arranged in large heaps or in long chains of diplococci, then narrower streptococci, finally bacilli, partly isolated, partly as long threads. In both tumors these same micro-organisms were to be found. The authors could also recognize micro-organisms in the contents of two ovarian cysts.

From their investigations the authors think they can draw the conclusion that solid, as well as cystic tumors in animals arise from a wandering in of lower organisms, just as excrescences are produced upon plants.

Excessive Salivation in Pregnancy.

With reference to this subject, Justus Schramm, in the *Allgemein. med. Central-Zeitung*, has reported the following case: A woman, who was seven months pregnant, poured out within twenty-four hours twelve hundred cc. of saliva; nausea, vomiting and great weakness were present, and the gums very much swollen. After all other means, such as iodide of potash, atropine, duboisin and galvanization of the sympathetic, etc., were tried in vain, bromide of potash proved extraordinarily successful. She was given a tablespoonful three times a day of a twelve per cent. solution of bromide of potash.

The Action of Belladonna and Opium in Diabetes.

Villeman (*Comptes rend.*, No. 7, 1887), writes as follows: In a young artilleryman, with a high degree of diabetes, who in spite of appropriate diet passed twelve to fourteen litres of urine containing about five per cent. of sugar, a combination of belladonna and opium caused a disappearance of sugar, and of all the symptoms of the disease. Improvement continued as long as the treatment was used, although other measures had given no result.

The Intraperitoneal Injection of Koch's Comma bacilli in Guinea Pigs.

Upon this subject, Vincenzi, in the *Centralblatt für die med. Wissensch.*, of June 18th, reports as follows: In opposition to the lately published researches of Huppe, who had seen the death of the animals experimented on, invariably follow the intraperitoneal injection of one centimetre up to a drop of cholera bacilli, that, in ten guinea pigs in whom under avoidance of every injury of the contents of the peritoneal cavity, ten to twenty drops of a second day's culture of cholera bacilli were carried into the belly, no disturbance of health could be obtained. Vincenzi supposes that cholera bacilli are reabsorbed in the belly, just as an injection of indigo solution in the lymph stream, and then deposited in the blood.

Gravel as a Purgative in Habitual Constipation.

In the *Allgemeine medicin. Central-Zeitung*, for June 22d, Dr Von Kacorowski, of Posen, recommends gravel in pieces the size of millet or hemp seeds, ten grammes to the dose, or a teaspoonful morning and evening, as a purgative: "1st. In habitual constipation. 2d. In chronic catarrh of the alimentary canal, from the mouth to the large intestine. 3d. In chronic heart and lung diseases of anæmic persons who would be weakened by a very active purgative. But it is especially advantageous and to be preferred in those cases of constipation which depend upon a spasmodic constriction of the circular muscular fibres of the anus, which are met with particularly in young persons with increased excitability of the nervous system, which exists with an organic or functional state of excitement of the genital organs, but especially in association with masturbation."

We cannot but commend the child-like obedience of German patients.

REVIEWS AND BOOK NOTICES.

NOTES ON CURRENT LITERATURE.

—Lea Brothers & Co., Philadelphia, have in press for early publication the third and final volume of the 'American System of Dentistry'; 'A Text-Book of Materia Medica and Therapeutics,' by Dr. Robert T. Edes; and 'A treatise on Human Physiology,' by Henry C. Chapman, M.D., professor of physiology in the Jefferson Medical College, of Philadelphia. For the same press, Dr. Roberts Bartholow, professor of materia medica and therapeutics in the Jefferson

Medical College, is preparing a work entitled 'New Remedies of Indigenous Source, their Physiological Actions and Therapeutical Uses,' which will make an octavo volume of about 300 pages.

BOOK REVIEWS.

The Relation of the Nervous System to Hæmophilia, Malarial Hæmaturia, etc. (Second paper,) C. H. Hughes, M. D., St. Louis. (Reprint from *The Alienist and Neurologist*, July, 1887.)

The author attempts to prove that hæmophilia is an "hereditary or congenital neuropathic affection of the sympathetic system." Malarial hæmaturia, purpura hemorrhagica and certain mythemias are due to "the lost vaso-motor control that allows arterial dilatations and permits of the fatal pressure of passive congestions and sanguinuric execution."

A Manual of Treatment by Massage and Methodical Muscle Exercise. By Joseph Schreiber, M.D., member of K. K. Gesellschaft der Aerzte, in Vienna, etc. Translated with the author's permission by Walter Mendelson, M.D., of New York. pp. 285. Philadelphia, 1887. Lea Brothers & Co.

It is very evident that at the present day there exists a stronger tendency than ever to employ external medication, not at the expense of, or with a purpose to supplant internal therapeutics; but merely on account of a better knowledge of the physiological and pathological conditions to which such treatment is applicable. The volume before us, which is well illustrated, is divided into five interesting chapters, the first of which is devoted to a definition of massage, and in it is held that the hand is superior to machinery, and that every physician by self-teaching, can acquire the art of mechano-therapy. Chapter second describes the physiological effects of massage—(1) Primary—removal of lymph, exudations, extravasations, etc.; (2) Secondary—increasing the circulation and stimulating the muscular and nervous system. In chapter third the methods of massage, such as pressing, tapping, pinching, squeezing, rubbing, and stroking are described; chapter four is devoted to an exposition of the physiological effects of calisthenics, and of the Swedish movement cure; and chapter five treats of the diseases to which mechano-therapy is suited. It is a book which, if it is well studied and its directions followed, will be a great gain to both physician and to many of his patients.

THE Medical and Surgical Reporter.

**A WEEKLY JOURNAL,
ISSUED EVERY SATURDAY.**

N. A. RANDOLPH, M. D.,
CHARLES W. DULLES, M. D., } EDITORS.

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DEVIATIONS OF THE SEPTUM NARIUM.

A number of theories have been advanced to explain the cause of deviations of the septum of the nose which sometimes give so much trouble to those who have them. Many authorities believe they are largely due to traumatism. Others believe that they are due to defects of development, while some go so far as to say that they are always due to such defects, and that these defects implicate the whole of the superior maxilla.

It is likely that the truth is between these two beliefs. Most deviations are probably due to defects of development either inherited or acquired. No doubt a fracture of the septum may occur and leave a permanent deformity behind it. But many occur without any traumatism, and in others a traumatism is the cause of the defective development.

In any case a deformity results which is often a source of annoyance, and sometimes of actual danger. To correct it various operations have been devised: exsection of a portion of the septum, cutting off of the protruding angle, and forcible straightening of the bone.

The latter operation is simple and safe. To do it a pair of strong, straight forceps are introduced—one blade in each nostril—and the septum is forced into a correct position. For this purpose, a pair of straight bone forceps, the blades of which have been wrapped with adhesive plaster, will do very well. After this a smooth, round needle is thrust up alongside the septum, under the mucous membrane and even into the septum itself, to act as a splint. This is left in place for eight or ten days, and then removed. Afterwards the correct position is to be maintained by the use of little cones made of hard rubber or ivory.

The results of this little operation have proved very satisfactory to those who have performed it; and it would seem to have decided advantages over any cutting operation.

THE DIFFICULTIES AND DESERTS OF MEDICAL JOURNALISM.

It is almost pathetic to observe the way in which the following item is going the rounds of the medical journals:—

"The following from the *American Medical Journal* may be of interest to the readers of regular publications: 'A newspaper in Illinois recently brought suit against forty-three men who would not pay their subscriptions, and obtained judgment in each for the full amount of the claim. Of these, twenty-eight men made affidavit that they owned no more property than the law allowed them, thus preventing attachments. Then they, under the decision of the Supreme Court, were arrested for petty larceny, and bound over in the sum of \$300 each. All but six gave bonds, while six went to jail. The postal law makes it larceny to take a newspaper and refuse to pay for it.'"

In the same connection we have recently noted an appeal from a very able Kansas City

contemporary to its subscribers, in which the statement is made that among "many hundreds" upon its books, there are only *two hundred and twenty* marked "paid to January, 1888."

It is unquestionably a shame that some physicians will not pay for the journals they take. But this is partly the fault of the journals themselves, which often push and crowd the doctor to subscribe, entice him on with special attractions which are not continued, let him run up a bill which gets big before he knows it, and then come down on him for payment.

The fact is there are almost too many medical journals. Those which are successful in every sense have their prosperity diminished by the sharp competition and underbidding of others for which there is but little *raison d'être*, and the latter struggle along, with few subscribers, few writers and no profits; doing harm to other journals and no good to themselves.

To any journal which really has a mission, struggle and hardships are the necessary preparation for success. To any journal published solely to make money, to gratify vanity, or to bolster up a commercial interest these experiences are apt to be the foretastes of failure.

We extend our hearty sympathy to every worthy struggler in the field, and commend to all the unflinching determination of the *REPORTER* to be such a good medical journal that thousands of medical men shall feel that they cannot do without it, and that they will pay for it—as they now do.

ANTIPYRIN AND ANTIFEBRIN AS ANALGESICS.

M. Germain Sée, in a paper read before the French Academy of Sciences, reports remarkable results from the use of antipyrin as an analgesic. He has used it in subacute rheumatism, and acute gout both primary and secondary to chronic gout with chalky deposits. Antipyrin, in doses of a drachm to a drachm and a half, removed both pain and swelling in from two to four days, without any bad effect upon heart or kidneys. Moreover, he has used it with particular suc-

cess in neuralgia and migraine, in sciatica, diabetic neuritis, zona, and locomotor ataxia. Confirmation of these good results is beginning to come in from other competent observers. More recently, Dr. H. M. Fisher reports a case in which he obtained a very happy result from the use of antifebrine in spinal syphilis. A noteworthy fact in these cases is that the pain does not always recur, and when it does is not so severe.

In recording the similar results produced by antipyrin and antifebrin, one is forcibly reminded of the studies of Blake, in which he has shown that, with some exceptions, metals which form isomorphous salts have the same physiological action, and that the physiological power increases with the atomic weight of the members of these isomorphous groups. Most of the new antipyretics (kairin antipyrin, thallin, antifebrine, antithermin, etc.) are isomorphous, crystallizing in rhombic prisms. Again, Lauder Brunton and Cash have found that in most of the cases in which a union is made between the amidogen and the methyl radicles in the alkaloids, there is a paralyzing action, and this action is said to be greater with than without the methyl radicle in connection with the amidogen in the alkaloid.

These new drugs are synthetic compounds. It would almost seem, therefore, that the science of chemistry is rapidly approaching such a state of perfection that it may soon be able to produce any drug as soon as the therapist had indicated what physiological action was desired.

MODERN METHODS IN HYPODERMIC MEDICATION.

Some weeks ago a correspondent inquired about the recent developments in the methods of hypodermic medication. We take pleasure in presenting in this number a very full list of the drugs thus employed, with doses and a statement as to strength of solution which has in each case been found most advantageous. One of the most important functions of a good journal is to give full, clear, and reliable replies to the queries of its readers. Our readers will always find the *REPORTER* prompt to respond to calls of this nature.

NOTES AND COMMENTS.

HYPODERMIC MEDICATION.

ADAPTED FROM EWALD'S HANDBUCH DER
ARZNEIVERORDNUNGSLEHRE.

The method of hypodermatic or subcutaneous injection was introduced into therapeutics in 1855, by Alexander Wood. In the meantime it has been so universally and heartily adopted by the profession of all countries, that it may now be considered as one of the most important advances of modern times in the department of practical medicine.

The process consists in the production of a local or systemic effect by the introduction into the subcutaneous connective tissue, of accurately graduated doses of the medication chosen. For this purpose there is used a small glass syringe provided with a lance-like hollow silver needle. Upon the piston (or cylinder) of the syringe there is a graduated scale, enabling one to estimate the exact amount of liquid at any time below the piston-head. The connections of the piston and cylinder are usually made of silver, though more recently vulcanized rubber has been used.

The first step is to fill the syringe with the amount of the solution it is desired to introduce into the organism. The skin of the spot is then rendered tense* by the thumb and forefinger of the left hand, whilst with the right, the needle of the syringe (held as a penholder), is pushed with a short, quick thrust, five to ten millimetres (one-fifth to two-fifths of an inch) beneath the surface, much in the same manner that one would puncture an abscess. After withdrawing the needle from the skin, the spot may be covered by a bit of adhesive plaster if thought desirable, though the escape of blood is so unimportant that this may be neglected. Many amateurs, and even more expert operators, make the mistake of entering the needle too slowly and not deeply enough. The operation, essentially trifling, is thus made more painful, and abscess is thereby rendered more probable by the different drugs used. Especial attention is to be directed that the canula be kept scrupulously clean. Our rule is, preceding an injection, to cleanse the

canula and needle by repeatedly drawing through it hot carbolized water.

The accurate dosage of the liquid to be injected is highly important, and for this purpose we must know the capacity of our syringe. Within certain limits, different syringes vary in this respect, and it therefore becomes necessary for every physician to determine exactly the capacity of the one he uses. At the present time most foreign instruments are made to hold one cubic centimetre, or one gramme [= 16.231 minims of water, or 15.434 grains Troy] of distilled water, the piston being graduated into fifty equal parts. One of these parts, therefore, corresponds to 0.02 ccm. [three-tenths of a minim or grain] of the liquid. The instruments generally used in the United States contain 25 minims, the scale upon the piston showing a division into 25 equal parts.

Subcutaneous injections are indicated in the following circumstances: In order by absorption to produce a prompt effect either locally or upon the physiological centers. In this way they are used especially to control spastic, neuralgic, and painful derangements generally; also insomnia, mania and delirium; latterly, also, they have been used as excitants; they are, moreover, of service in hemorrhages, intoxications (notably by curare in strychnine poisoning), intermittents, in amblyopia and amaurosis, aneurism, internal hemorrhages, uterine diseases, (especially in myoma and fibroma), parenchymatous ulcers, etc., etc.

When it is desired to produce a local effect, as, for example, the relief of neuralgia, the place of puncture is chosen as near as possible to the painful tissue. In neuralgia a point may be found that reacts painfully to pressure, and this *point douloureux* is the best place to insert the needle. For systemic effects the location is unimportant. If repeated injections are to be made, different spots are to be chosen.

The drugs used are numerous. When the drug is in a sufficiently concentrated form, and soluble in water, glycerine or dilute alcohol, and if, moreover, it be not too severe a local irritant, it may be used in the manner proposed. There is an increasing number of such agents being constantly introduced. The most important now used in this way are the following: *

* If the points chosen be over superficially situated bone, as, e. g., the temple, the skin must be pinched up instead of made tense, by the left hand, and the needle thrust between the skin and the periosteum. If the place be in the neighborhood of important nerves, arteries, veins, etc., these must be carefully avoided.

* The approximate equivalents of the metric system are given below in Troy measures or minims. This accounts for the peculiar fractions sometimes resulting. For small amounts the uniform measure of minims is used, practically equivalent to the grain in aqueous solutions.

ACIDUM BENZOICUM.—One part dissolved in twelve of alcohol; a whole syringeful, and, if necessary, others at short intervals; as an excitant, and in uremia. Solution and syringe should be slightly warmed before injecting. (*Rhode*).

ACIDUM CARBOLICUM.—Of a one to two per cent. aqueous solution, inject 15 to 30 minims, *i. e.*, gr. $\frac{1}{8}$ — $\frac{1}{4}$ of the acid. (Recommended first by *Hueter*.)

ACONITUM.—Dissolve gr. iss in aquæ 3iiss, and inject from 3 to 6 minims, *i. e.*, gr. $\frac{1}{8}$ to $\frac{1}{4}$ aconitin.

ETHER, ACETIC ETHER, AND SPIRIT OF ETHER.—As an excitant in extreme collapse, one or more syringefuls.

APOMORPHINÆ HYDROCHLORAS.—Gr. iss dissolved in 3iiss of water; of this inject 8 to 16 minims, *i. e.*, gr. $\frac{1}{8}$ — $\frac{1}{4}$ of apomorphine as an emetic dose.

ATROPINÆ SULPHAS.—Dissolve gr. $\frac{1}{8}$ in 3iiss of water and inject \mathfrak{m} iij— \mathfrak{m} viij, or gr. $\frac{1}{16}$ to $\frac{1}{8}$ at a dose. Of *atropinum valerianicum*, the same. The combination of atropine and morphine in the proportion of one part of the first to one-tenth of the last (or less), is recommended by Nussbaum and Fraignaud. The toxic effects of the individual components are said to be obviated whilst the combined action is unaffected. Gelatine discs of morphine and atropine are to be had.*

CAMPHORA.—A syringeful of a one in twelve alcoholic solution, as excitant.

QUININÆ HYDROCHLORAS (THE CARBAMIDE.)—One or two parts to ten of water are said to produce no irritant effect.

QUININÆ SULPHAS AND HYDROCHLORAS.—One part to ten of water (adding a few drops of sulphuric acid), or one to six of glycerine (without the acid); inject \mathfrak{m} v to \mathfrak{m} xv or, gr. $\frac{1}{8}$ to jss, as a dose.

These injections frequently produce symptoms of local irritation, sharp pains, abscesses, etc. According to Köbner, quininæ, hydrochlor. gr. ii–iv with water or glycerine, $\mathfrak{a}\mathfrak{a}$ gr. viiss, (*i. e.*, in the proportion of one to four of the menstruum) yields, with warmth, a clear solution which, injected when tepid, causes no irritation.

QUININÆ BISULPHAS.—Soluble in glycerine one to three.

QUININÆ HYDROBROMAS.—Said to combine the sedative effects of bromine with the action of quinine (Gubler). It is

soluble (with heat) in about 15 parts of water, or 4 of glycerine. Gr. xv in 3iiss of glycerine, and 3i of water yield gr. iss of the drug to \mathfrak{m} xv. Used by Soulez in intermittents, in doses of gr. viiss–gr. xv. Other salts, as quinin. ferro-citricum, bitartaricum, valerianicum, etc., are recommended, but are less important than the above.

HYDRATE OF CHLORAL.—Five parts to ten of water; one to three syringefuls, containing gr. viiss to gr. xxxvii of the hydrate to the dose. Little suitable.

COCAINÆ HYDROCHLORAS.—One to two parts, to ten of water; as a local anæsthetic. Especially recommended by Mandelbaum in combination with quicksilver, in the subcutaneous treatment of syphilis.

COFFEINA.—Dissolve gr. xv in alcohol and water, each, gr. xxxvii and inject \mathfrak{m} x— \mathfrak{m} xv or more, as a dose; *i. e.*, gr. $\frac{1}{8}$ —gr. $\frac{1}{4}$ of caffèin.

CONIUM.—Gr. iss in alcohol, dil. et aquæ $\mathfrak{a}\mathfrak{a}$ 3iv; inject \mathfrak{m} ij— \mathfrak{m} iij=conium. gr. $\frac{1}{8}$ —gr. $\frac{1}{4}$.

CURARE OR WOORARA.—A very unequal preparation of differing solubility: gr. iss in 3iiss of water; inject \mathfrak{m} iij— \mathfrak{m} viij, containing of curare gr. $\frac{1}{8}$ —gr. $\frac{1}{4}$. The dose is not accurately to be laid down, and must be determined by the efficacy of the drug previously proved by trial upon animals, and by the existing circumstances of the case. Offenburger injected in hydrophobia three grains in $4\frac{1}{2}$ hours, and Penzoldt $5\frac{1}{4}$ grains in $10\frac{1}{4}$ hours. — (*Berl. klin. Wochenschr*, 1882, No. 3.)

DIGITALINE.—Gr. iss in alcohol et aquæ $\mathfrak{a}\mathfrak{a}$ 3iiss; inject \mathfrak{m} iij— \mathfrak{m} vj = gr. $\frac{1}{8}$ —gr. $\frac{1}{4}$ of digitaline.

EMETIN.—Dissolve gr. iss with a little sulphuric acid in 3v of aqua; of this, inject \mathfrak{m} viij— \mathfrak{m} xvj = gr. $\frac{1}{8}$ —gr. $\frac{1}{4}$.

EXTRACT OF PHYSOSTIGMA.—Glycerine solution (one part to 60, M. Rosenthal), and in water gr. iiss to 3i (Eschenburg)—gtt. i–v in Trismus neonatorum.

EXTRACTUM OPII.—Dissolved in water and filtered. Dose of each injection, \mathfrak{m} i–ij= of the drug, gr. $\frac{1}{8}$ —gr. i.—(Lebert).

EXTRACTUM SECALIS CORNUTI AQUOSUM. (Ergotin, according to Bonjean, Ergotinum bis dialysatum).—3vi with alcohol, dilut. et glycerin $\mathfrak{a}\mathfrak{a}$ 3iv; \mathfrak{m} viij— \mathfrak{m} xvj. Ergotinum dialysatum is better adapted for injections (Berg), pure or with water. i to 4, \mathfrak{m} iij— \mathfrak{m} viiss to the dose. Dragendorff has introduced a *Solution acid. sclerotinici* said to contain the active principle of secale cornut.; gr. $\frac{1}{16}$ —gr. $\frac{1}{4}$ in \mathfrak{m} iij to \mathfrak{m} iij $\frac{1}{2}$ of water.

* And also of all the principal agents used in hydropathic medication. If of trustworthy manufacturers or of proved accuracy of proportion and quickly soluble, they are recommendable.

FERRI OXIDUM DIALYSATUM, FERRI ALBUMINATUM, PEPTONATUM, ETC.—On account of their insolubility, local irritability, and because required to be given for long periods, iron preparations are little adapted to subcutaneous injection. Even the ferrum. pyrophosphor. ammon. citricum, recommended by Huguenin has not proved good in our practice. It is moreover easily decomposed.

HYDRARGYRI ALBUMINATUM (according to Bookhart).—The deposit of \mathfrak{D} ii of the sublimate filtered and washed with blood serum, is with \mathfrak{D} vss of common salt, diluted by water to a quantity equal to 200 grammes or \mathfrak{Z} vj- \mathfrak{Z} viii. \mathfrak{m} xv of the solution contains gr. $\frac{1}{4}$ of the sublimate in albumen. Inject \mathfrak{D} vss once or twice daily.

HYDRARGYRI CHLORIDUM CORROSIVUM.—Dissolve gr. $\text{iiij}\frac{1}{2}$ in \mathfrak{Z} vi of water and inject \mathfrak{m} xvj once or twice daily, dividing the injection in two different spots (Lewin). Gr. $\text{iiij}\frac{1}{2}$ in \mathfrak{Z} iiij $\frac{1}{2}$ of water and inject \mathfrak{m} v-x (gr. $\frac{1}{3}$ -gr. $\frac{1}{2}$ of the sublimate) as a dose (A. Eulenberg). The solution of the sublimate is recommended by V. Bamberger, and the one per cent. hydrargyrum peptonatum. The combination of a one per cent. sublimate solution with 3 per cent. of chloride of sodium is highly spoken of (Lasser, Stern). In all subcutaneous injections of mercury it is absolutely essential that the needle, canula, etc., be subjected to the most thorough disinfection and cleansing, and that the needle be buried in the muscular tissues.

HYDRARGYRI CHLORIDUM MITE (Neisser). Calomel and chloride of sodium, each \mathfrak{D} iv, and water \mathfrak{Z} iiij. Two injections a week of \mathfrak{m} xv- \mathfrak{m} xxv.

HYDRARGYRI IODIDUM RUBRUM, dissolved in a solution of iodide of potassium (A. Martin). About the following proportions are recommended: Hydrarg. iodidi rub. gr. iv, potass. iodid. gr. xxxvii, aquae destill \mathfrak{Z} vi. Inject of this \mathfrak{m} viii- \mathfrak{m} xvj (=gr. $\frac{1}{3}$ to $\frac{1}{2}$ of the drug.)

HYDRARGYRI FORMAMIDATUM (Liebreich).— \mathfrak{m} xvj corresponding to gr. $\frac{1}{4}$ of the red oxide. For syphilis.

LIQUOR AMMONII ANISATI, pure.— \mathfrak{m} xii-xvj; as excitant.

LIQUOR POTASSII ARSENITIS (Fowler's Solution).—Dilute with 2-3 parts of water; in single doses corresponding to \mathfrak{m} ii-iii of Fowler's solution. Recommended for systematic effect in chorea, tremor and neurosis, by Eulenberg, and for local effects upon malignant new-growths.

MORPHINÆ HYDROCHLORAS.—Dissolve gr. iss in \mathfrak{D} iv of water; of this inject \mathfrak{m} v- \mathfrak{m} xv

(=morphia gr. $\frac{1}{8}$ to gr. $\frac{1}{2}$.) (If in exceptional circumstances greater doses are desired, give a more concentrated solution). Aqueous solutions of morphine are apt to gather mold.¹ Avoid attempting to purify such, and to make them useful by filtering them, because by filtration and the absorption of the filter paper the strength of the solution becomes doubtful. Camphor water instead of pure water is recommended, though the same fungus growth has been observed with this. Still better is to substitute glycerine for water, in the proportion of one to ten parts, and dilute with water when used. \mathfrak{R} morphinæ hydrochlorat. gr. xv, warm with glycer. pur. \mathfrak{Z} iss; dissolve and add aquæ distill \mathfrak{Z} iss. Of this, \mathfrak{m} xv. to \mathfrak{Z} iss=gr. $\frac{1}{4}$ to $\frac{1}{8}$ of morphine.²

NICOTINE.—Dissolve gr. $\frac{1}{2}$ in \mathfrak{D} iv of water, and inject of this \mathfrak{m} iv equivalent to gr. $\frac{1}{8}$ of nicotine.

PILOCARPINÆ HYDROCHLORAS.—Gr. iii in \mathfrak{Z} iss of water, inject \mathfrak{m} xv (=gr. $\frac{1}{4}$ pilocarpine).

STRYCHNINÆ SULPHAS.—Gr. iss in \mathfrak{Z} iss of water. Of this inject \mathfrak{m} iii- \mathfrak{m} x, i.e., from gr. $\frac{1}{4}$ to gr. $\frac{1}{8}$ of strychnine.

TINCTURA CANNABIS INDICÆ (with water).— \mathfrak{m} v- \mathfrak{m} x, in each injection.—(A. Eulenberg.)

TINCTURA OPHI.— \mathfrak{m} iii- \mathfrak{m} x, without admixture.

VERATRIN.—Gr. $\frac{2}{3}$ in \mathfrak{D} iv of alcohol, and dissolved in \mathfrak{D} iv of water. Inject of this \mathfrak{m} iii- \mathfrak{m} x, equivalent to gr. $\frac{1}{8}$ to gr. $\frac{1}{3}$ of veratrin. Not well suited for injection.

Subcutaneous Injections for Production of Local Effects.

Hypodermatic injections are also made in order to bring about local irritation in the part, and in this way to produce an antispastic or derivative action (the parenchymatous substitution of Luton). Luton recommends for this purpose sodium chloride, alcohol, tincture of iodine, tincture of cantharides, sulphate of copper, silver nitrate, etc.

More recently the hypodermatic method has been used for the destruction of new growths. The following agents are employed:

¹ NOTE.—All the alkaloids are prone to deteriorate by the growth of a micro-organism in them at the expense of the alkaloid. Fresh preparations are therefore always advisable.

² NOTE.—In injecting morphine great care should be exercised to avoid the vessels, since introduced directly into the circulation severe depression is likely to ensue.

ACIDUM ACETICUM.—Dilute one part of the acid with five parts of water, and inject m xv to m xxv into the growth.—Broadbent).

ACIDUM CARBOLICUM.—In Osteochondroma (Hunter), Naevi (Bradley), Splenic tumor (Mosler).

ARGENTI NITRAS.—Dissolve gr. iss in ℥vi to ℥ix of water. Several syringefuls may be injected into the tumor, and immediately thereafter the same number of injections of sodium chloride solution (gr. iij to ℥vij of water).—(Thiersch).

IODINE.—Gtt. vj to a syringeful of the undilute tincture in strumous and lymphatic enlargements (Lücke). Instead of the tincture a combination of iodine and iodide of potassium solution, being less painful, may be injected. The proportions would be about these:—Iodi. gr. viiss, potass. iodi. gr. xxxvii, aquæ, ℥xiii . The submucous injection in hypertrophia tonsillarum has very lately been advocated; either a solution of the iodide of potassium one to fifty (Jakubowitz), the combined iodine and iodide (iodine, gr. ii, iodide, gr. xxxvii, water, ℥viiss —Rumbold); or iodine and glycerine (1-2 iodine to 100 of glycerine—B. Fränkel), or a few drops of the pure tincture.

The glycerine solution and iodol is also used.

PEPSINUM in solution has likewise been tried by Theirsch and Nussbaum.

ALCOHOL.—One-half to a whole syringeful in scrofula.—(Schwalbe).

TARTAR EMETIC.—Gr. vj in ℥ijss of water; inject a few drops in cystic tumors of the scalp.—(Kraft-Ebing).

ZINCI CHLORIDUM.—Of the deliquesced salt inject one to three minims.—(Richet).

The experiments of Menzel and Perco to utilize the method of subcutaneous injection for the introduction of nourishment into the system have not succeeded. Fat, milk, egg-yolk, fresh blood-serum, etc., were used, but the quantity of nourishment that could be brought in this way within the reach of the absorbents, was far too little to produce the desired effect of nourishment. V. Ziemssen, however, in anæmia has with apparent success been able to introduce a considerable amount of defibrinated blood (as much as ℥xiii) into the system by the hypodermatic method.

In addition to the above agents, the deep injection of chloroform is advocated by Professor Roberts Bartholow in cases of neuralgia—e. g., of the infra-orbital divisions of the fifth, the sciatic, etc. Whether the neuralgia be superficial or deep, the needle must be thrust deeply, and while obviating

puncture of the nerve itself the chloroform must be introduced near the nerve at its exit from the foramen, pelvis, etc. It is held to be not only palliative but curative. The pure chloroform, or the official spiritus chloroformi U. S. P. may be used. There is temporary swelling and discomfort, but no abscess is formed. m x of the pure chloroform is a full dose.

[Phyostigma, or its active principle, eserine, is also recommended for cases of tetanus, strychnine poisoning, etc. The dose is $\frac{1}{16}$ to $\frac{1}{10}$ of a grain. In a solution of gr. iv. to aquæ ℥i , m ii will contain gr. $\frac{1}{16}$ of the drug.]

A Substitute for Iodoform.

Chassaignac (*New Orleans Medical and Surgical Journal*) recommends the oxyiodide (subiodide) of bismuth as an efficient substitute for iodoform. He describes it as of a bright brick-red color, impalpable when well powdered, almost odorless and tasteless, insoluble in water, alcohol, ether or chloroform, and not imparting its color to linen. It may be made, he says, so as to cost only from \$3 to \$3.50 a pound, although ten years ago, when it was recommended by Dr. A. S. Reynolds, its cost was a bar to its general adoption. Dusted on a raw surface, it produces a thin, silvery film, but causes no stinging. The author gives the following formula for its preparation, devised by Mr. J. W. England, and published in the *American Journal of Pharmacy*:

Bismuth subnitrate.....	174 grains;
Nitric acid.....	3 fluid ounces;
Hot water.....	12 "

Dissolve the bismuth salt by the acid in a porcelain capsule with the aid of heat, and add the hot water gradually, stirring after each addition; then add the solution gradually to a solution of 663 grains of potassium iodide in twenty-eight ounces of hot water, agitating well after each addition. The agitation should be continued until the decomposition is complete; then the precipitate should be filtered out at once, washed with warm water, dried and powdered.

Urticaria from Bed-Bugs.

A. H. Ohmann-Dumesnil, in the *St. Louis Medical and Surgical Journal*, July, 1887, says: "My attention has been more particularly called to this subject by having noticed several similar cases at comparatively short intervals. It is a well-known fact that the ordinary bed-bug (*cimex lectularius*) produces a wheal which is of a burning, itching

character, and marked by a very small, almost imperceptible puncture near the central portion. The animal itself is not always confined to beds, but occasionally roams abroad, and, in consequence, when it seizes upon its host, is proportionately more voracious on account of the scarcity of food which it finds. Along the edges of water-closets, especially those adjoining sleeping rooms, it is no uncommon thing to find these odorous pests. They lie in wait for their victims and, whilst very insidious in their method of attack, produce large and troublesome wheals in the popliteal space and neighborhood. The victim has urticaria suddenly and then cudgels his brain as to its probable cause, little suspecting that an unseen foe has attacked him. By lifting the cover of the water closet, which is near the bowl, the "bugs" can be discovered. Then when nature drives one again to the closet, introduce a piece of paper between the body and seat, and upon removing it the animals will be found upon it. Carbolic acid, corrosive sublimate or, better still, camphor-phenique liberally distributed about their haunt will eventually destroy these disturbers of the peace of a contemplative nature."

Picrate of Ammonia in Malarial Fevers.

Dr. E. S. Fuller presents the following interesting note in the *New York Medical Record* of July 2, 1887: Having been for many years a sufferer from chronic malaria, and being at the time afflicted with an unusually severe attack, for which I had taken the usual remedies without receiving any benefit, I at once procured some of "Merck's" picrate of ammonia and began its use in half-grain doses (made into a pill with extract of gentian) three times a day. In three days' time there was marked improvement in all my symptoms. Had no more chills, pain in head and back had left me, and I awoke in the morning without those terribly exhausted and irritable feelings which those who suffer from this disease so well know. This result encouraged me to make trial of the drug in several cases of similar trouble in which I had been using quinine, etc. I prescribed it for six adults, of both sexes, and kept watch of the effect. In all but one case the same marked improvement speedily resulted. I now began to notice a peculiar, deep-orange color in my urine, without any change in quantity, and a chemical analysis of it showed that except for the change in color it was normal. Upon inquiry I found that the urine of all the patients was of this same orange color.

Having taken the medicine myself in doses as above mentioned for ten days, I decided to stop its use and watch for the disappearance of this color from the urine. To-day, May 24th, seven days since stopping the medicine, there is not the least improvement in the color of my urine, and the whites of my eyes and the skin of my face generally, are the color of one mildly jaundiced. The same thing has occurred to all my patients who have taken the remedy for a week. One lady, to whom I gave the maximum dose, one and a half grains three times a day for eight days, is now deeply jaundiced, the color involving not only the whites of the eyes and the skin of her face, but also the skin of her neck and breast, from which, shading to a lighter color, it covers the rest of her body. In each case the tongue is clean, bowels not affected and appetite good. I do not understand why the discoloration of the urine remains so long after stopping the medicine, or why it should cause discoloration of the skin at so late a day.

Eczema Papulosa Contagiosa, or Prairie Itch.

Dr. H. J. Warmuth, in the *Nashville Medical News*, July 1st, 1887, says:

Eczema is generally described in the textbooks as a non-contagious affection of the skin; my two years' experience with this dermatosis, however, convinces me that the present eruption is contagious, and has been gradually propagated from one neighborhood to another, until we find it diffused, not only over some of the Southern, but also Eastern States. By a tacit understanding among the people of the invaded States, it has been named "the itch," *par excellence*, and on the prairies "the Prairie Itch;" but everywhere the symptoms, course, and finale of this affection seems to be the same.

What is the cause of the present contagious form?

Prior to the last, we had two very severe winters, something rather unusual in this latitude. People had to house and clothe themselves more carefully, and hygienic measures were generally grossly neglected among the lower classes, from whom the present affection received its first impetus. Wearing heavy flannels for weeks and perhaps for a longer time, without proper ablutions and without frequent change of underclothing, must necessarily produce an irritation and congestion of the skin, which sooner or later, assisted by the unavoidable scratching of the itching surface, will form an eczematous eruption, which with all disregard to cleanliness is destined to advance

to other stages, and to contribute to the extension and persistence of the eruption. The clear yellow serum contained in the minute vesicles will, under these circumstances, undergo a change in its chemical nature that will undoubtedly favor the formation of parasites. This theory will probably explain the contagiousness of this affection. In all cases, the patient's themselves could trace their affliction back to friends with whom they slept or whose clothes they wore. If our microscopists would investigate this matter, our doubts would soon be at rest.

Acting under the idea that our eczema papulosa was of a parasitic nature, I adapted my treatment accordingly and met with great success.

Where the patients presented only an irritable and congested skin, *i. e.*, in the first stage, I merely ordered the patients to use inunctions with lye soap (*sapo viridis* would be better) all over the body at bedtime, and in the morning to bathe with warm water. Blue mass whenever needed; if not, then sulphate of magnesia, three drachms in a wineglass full of water before breakfast. Continue the soap every other night; the salts every morning till well. This was generally sufficient to cure the first stage.

As soon as the vesicles appear upon a tense, swollen, and red surface, they soon increase in size and become filled with limpid serum. In mild cases and under appropriate treatment, the serum is absorbed, the vesicles dry up and form either thin crusts or scales, which soon fall off and leave the skin red and tender. In this stage I prescribe:

- R. *Plumbi acetatis*
Acidi carbolic...... $\text{aa } \frac{3}{4}$ ij
Extract. belladon. fluid...... $f \frac{3}{4}$ ss
Glycerini..... $f \frac{3}{4}$ ij
Aque q. s. ad...... $f \frac{3}{4}$ x

M. Sig.—Apply soft cloths moistened with this solution to the affected parts. When dry moisten again and keep moist.

This soothing solution will act like a charm and subdue the severe itching and burning. Internally I prescribe:

- R. *Magnesiæ sulphatis*..... $\frac{3}{4}$ iv
Elixir vitrioli..... $f \frac{3}{4}$ ss
Tinct. gentianæ..... $f \frac{3}{4}$ ij
Aque q. s. ad...... $f \frac{3}{4}$ ij

S.—A teaspoonful in wineglassful of water after each meal.

In anæmic cases I add *ferri sulphatis gr. xvi* to the above. This mixture will keep the contents of the bowels in a soluble state and disperse cutaneous congestion. It also acts as a mild tonic.

As soon as the vesicles burst the eruption becomes confluent, forms dark-brown crusts, and leaves an unhealthy state of ulceration under it, I change the external treatment. The ichor in these cases is generally so irritating that under the crusts ulceration is deepening. Where I find crusts, I order poultices to remove them; but if already removed, I give my patients the following:

- R. *Acidi carbolic.*..... $\frac{3}{4}$ ij-ijj
Zinci oxidi..... $\frac{3}{4}$ ij
Cosmolini (vel vaselini)..... $\frac{3}{4}$ ij
M. ft. ungt. Sig.—Anoint two or three times a day.

Sometimes I use the ungt. *hydrarg. amoniati* of the U. S. D., with carbolic acid, and with equal success.

I continue the saline mixture, but should the patient need a bitter tonic, I prescribe *elix. calisaya*, *strychnine*, and iron.

In all stages, I insist upon frequent ablutions and change of underclothing.

Interesting Points About the Teeth.

The *Boston Med. and Surg. Journal*, July 7, 1887, contains the following interesting items:

Four sets of teeth before the age of fifteen years.—A child, under the care of Dr. Gatching, developed the first set of teeth at the age of six months. These teeth were all shed at nine months. At eleven months, she began teething again, another set of teeth being erupted in four months. Six weeks after, these teeth began to crumble, and were entirely lost. Her weight at this time was ten pounds. At thirty months the third set appeared, and these remained till the age of four years, when they were extracted. The fourth set began to erupt at eleven years, and the dentition was complete at fifteen.

Planting teeth in artificial sockets.—Dr. Younger has invented this new operation. When a tooth has been lost he drills a suitable hole in the alveolus. Into this hole, which should be of the same shape as the root of the tooth to be planted, he forces the tooth, which has been previously filled and soaked in a solution of bichloride of mercury in water, of a strength of one to a thousand. In most cases no ligatures are required to hold the tooth in position. There is little soreness of the parts, and in a day or two the tooth feels like the others in the mouth. Younger considers a tooth which has been out of the mouth for several years as good as a recently extracted one, as the root-membrane retains its vitality as do seeds. There are two dangers in the operation: First, one may transmit syphilis or other dis-

ease; Second, the planted tooth has no living pulp and is more liable to decay, and, like all pulpless teeth, may ulcerate. The writer has examined the teeth of sheep with the view of dissecting out the incisors of a freshly killed animal of the proper age to have the roots unclosed. The pulp in these cases is large, and if properly cut off and inserted into the human jaw ought to go on growing. If this should happen, the roots would close and the tooth would then be a living tooth, instead of a pulpless one. By cutting off the ends of the crowns of a sheep's incisors, these would answer very well for this purpose, and if Younger's operation is really a successful one as tried by three or four years' time, this experiment will be made.

The importance of regularly examining the saliva.—Now that we know that decay in the teeth is due to acids formed from fermenting substances, the importance of keeping the saliva alkaline cannot be overestimated. If it is acid or neutral, it cannot neutralize the acids formed in fermentation, which collecting in the spaces between the teeth and about their necks, are certain to produce decay. The patient should be taught the use of litmus paper, and directed to test the reaction of the mucous membrane and parotid saliva at least once a week. If the reaction is acid, he should take the remedies found appropriate to his case. Fermentation takes place in every mouth, and yet there are many persons in whose mouth decay is either wanting or is what may be called accidental. In all such mouths the reaction of the saliva is always alkaline.

Agaricin as Used in Bellevue Hospital.

Agaricin (the active principle of agaricus albus) gives uniform results in checking excessive perspiration in phthisical and fever patients. The following formula is used at Bellevue Hospital:

B.—Agaricini (Merck).....gr. x.
Atrop. sulph.....gr. j.
Acidi sulph. arom.....℥ 1200
Dissolve and filter.
Dose ℥ x, containing $\frac{1}{2}$ gr. agaricini, $\frac{1}{10}$ gr. atrop. sulph. and ℥ x arom. sulph. acid. To be administered in syrup of simple elixir.

It may also be advantageously given in pill form, combined with Dover's powder. Thus:

B.—Agaricini.....gr. ij.
Pulv. Doveri.....gr. xxv.
M. Ft. pil. No. xx.
Sig.—One pill five or six hours before retiring or sweat comes on. Its action is slow, hence the necessity for giving it early.

—*Quarterly Bulletin*, April, 1887.

Injection of Sulphuretted Water for Phthisis.

In connection with the article by Prof. H. C. Wood in the *REPORTER*, May 28, 1887, it is interesting to note that Dr. H. A. MacCallum, of London, Ontario, has found enemata of water, charged with sulphuretted hydrogen, of use in this disease. In an article in the *Medical News*, July 23, 1887, Dr. MacCallum says:

I inject the watery solution into the bowel, depending on the mechanical and physiological action of its mucous membrane to free and absorb the gas. A perfectly saturated solution is prepared (not less than eight hours should be taken for saturating cold water with sulphuretted hydrogen gas), of which $\frac{3}{4}$ viij are diluted with $\frac{3}{4}$ xx-xxx of water, and securely corked in ale-bottles. The contents of one of these, night and morning, after warming to 90°, are slowly injected into the bowel; not less than thirty minutes should be taken to do this. It is necessary to observe such precautions as would be taken in rectal alimentation, viz., the exclusion of air, the compression of the sphincter ani with the fingers, and afterward by directing the patient to extend the lower limbs. With some patients I precede the solution with laudanum. The majority, after gaining skill and confidence, retain the solution altogether.

As to results: The profession will be disappointed if they look for a "positive cure from phthisis" in this remedy. In no single case have I used it alone, and any results that were extremely favorable might not be wholly ascribable to the rectal mode of treatment.

I would not be surprised to find that the mass of the profession, who are now giving, or about to give this drug a trial, will discard it as worthless, because they are looking for results I feel sure they can never obtain. I think I am fair when I say to patients who have troublesome pains in the chest, expectoration of vast quantities of muco-purulent matter, and but slight loss of flesh, that it is a remedy of great value. Its tendency to disorder digestion, however, greatly diminishes this.

I have seen three toxic cases. The symptoms of Miss A. will answer for all. She took $\frac{3}{4}$ xij, properly diluted, in three minutes. Five minutes after she complained of oppressive breathing. Her face became pallid, and "her eyes turned up." She passed rapidly into a state of syncope, from which she revived by feeble efforts at vomiting. The solution was still in her bowel when I was called to see her. I ran it off with a hard rubber tube; and gave her brandy. One

hour after I found her recovered with the exception of some gastric disturbance, pulse 108, temperature 97°. All three rapidly recovered; had subnormal temperature and gastric trouble for two days. Some patients bear 3xx diluted without trouble, if more than thirty minutes be taken for its introduction.

I prefer the solution to the gas for the following reasons:

1. The dose is uniform. In Bergeon's method the dose depends on the temperature and strength of the solution.

There is no apparatus wanted except a household syringe. I generally prepare several bottles at a visit, directing them to be kept in a cool place. The nurse can prepare the bottles, and in this way patients at a distance can be easily treated.

3. The solution causes less pain to the patient; if it is rejected, another bottle can be used.

4. There is no call for the use of carbon dioxide—a gas considered valueless, and contra-indicated. To say CO₂ is antiseptic is contrary to all physiological truths, and if it possesses any value in phthisis it is due to its sedative action. The blood appears to take up oxygen more rapidly after its use, but even this action is only temporary.

5. Bergeon failed with chlorine gas. I was able to give it in solution and found it well borne. I did not give it for any time, fearing it had a tendency to produce anæmia, by combining with the iron in the hæmoglobin.

Counting the Ribs.

Physicians are frequently mistaken in counting the ribs. One must never start at the clavicle. We must start from the suprasternal notch, obliquely and below which is the first intercostal space. Or again by palpation of the sternum the first projection is the junction of the first and second piece, at which we find the articulation of the second rib. One is sometimes astonished at the space between the clavicle and third rib. One forgets the breadth of the first rib.—*Canada Practitioner.*

Charcoal and Camphor.

A mixture of equal parts of camphor and animal charcoal is recommended by Barbocci for preventing the offensive odor and removing the pain of old excavated ulcers. The camphor is stated to act as a disinfectant, and the charcoal absorbs the offensive odors.—*British Medical Journal.*

CORRESPONDENCE.

Bergeon's Method.

EDS. MED. AND SURG. REPORTER:

Sirs: In the number of the REPORTER for July 2nd, and on page 35, I saw an "Item" in regard to Diogenes. Now, if you see the old man dodging around with his lantern, you can send him to Philipsburg, and he can find two doctors who have never given gaseous enemata.

Philipsburg, Pa.

[We are glad to be able to say that in the next issue of the REPORTER there will appear a short practical paper by a physician who has been giving Bergeon's injections daily for some months. It will give all the details of the operation, with directions for "home made" apparatus.—EDITORS OF THE REPORTER.]

An Unusual Symptom.

EDS. MED. AND SURG. REPORTER:

In the REPORTER of April 9, 1887, p. 450, under the heading, "A Country Doctor's Record," by G. Law, M. D., of Greely, Colorado, a case of labor is reported in which the Doctor says: "Mother had a very extensive prolapso ani and prostatitis." I would be glad if the doctor, through your journal, would give us the symptoms which led to the diagnosis of *prostatitis*, as I have never seen a case of the kind reported or heard of one before. Indeed, I have been led to believe that, from some anatomical considerations, such a case could not exist. A little light on the matter, by the doctor, will be gratefully acknowledged by another country doctor, who has been a subscriber to the REPORTER for several years.

[The communication referred to was published in the REPORTER three weeks before the present editors assumed control. The error quoted must have been due to a printer's mistake, which eluded the vigilance of the proof-readers. Dr. Law, no doubt, meant "proctitis"—not "prostatitis."—EDS.]

Atropia Injections for Gonorrhœa.

EDS. MED. AND SURG. REPORTER:

Sirs:—I wish to call the attention of your readers to the value of urethral injections of sulphate atropia in urethral and vesical irritability produced by gonorrhœa. Where gonorrhœa is accompanied with much vesical irritation, frequent urination and tenismus, I find the symptoms speedily relieved by an injection of $\frac{1}{4}$ to $\frac{1}{2}$ gr. of sulphate atropia, in one or two drachms of

water, pressed gently along the urethra into the bladder. I have resorted to this method in several cases with the happiest results. I also used it in a patient who had taken an over dose of cantharides, which produced great vesical tenesmus and pain in passing water. One injection gave immediate relief. I leave the injection in the bladder, and have never seen any poisonous effects from the drug. I think it superior to the salts of cocaine, as the effects are more lasting. If any of your many readers have used the atropia as I have above directed, I would be pleased to hear of their results.

D. W. BOONE, M. D.

Bellaire, O., July 13, 1887.

Treatment of Stomatitis.

EDS. MED. AND SURG. REPORTER:

Sirs: The root of sumac (*rhus glabrum*) has a thin outer dark-colored bark. Under this there is a thick white bark, easily shaved from the wood. This, when dried, keeps well. Make an infusion, or even a decoction, of it. The latter is a mucilaginous mixture without taste or smell; and it is an excellent remedy in cases of stomatitis, discounting chlorate of potash, and all other irritating washes.

BACK WOODS.

[The above is from a subscriber in Canada, in whose judgment we place great reliance; and we recommend to our readers the simple remedy which he suggests.—EDITORS OF THE REPORTER.]

A Correction.

EDS. MED. AND SURG. REPORTER,

Sirs:—In my communication on Quinine in the REPORTER of May 21st, I referred to a doubt expressed by Dr. Holmes whether the mere *reduction of temperature* is of any value in febrile affections. Instead of "temperature," it should have been *pulse rate*.

HIRAM CORSON, M. D.

July 26, 1887.

NEWS AND MISCELLANY.

Medical Matters in Vermont.

(FROM A SPECIAL CORRESPONDENT.)

The Medical Department of the University of Vermont, at Burlington, held its Thirty-fourth Anniversary on the 18th ult. The examinations of the class, which numbered seventy-nine, took place the week previous, and was a very thorough and exhaustive one. Of the number that presented themselves for graduation only fifty-three passed and received

the degree of the college. Among those who were "plucked," as the term is, was a gentleman from the Pacific Coast, who held a bogus diploma from some foreign medical college, and has been practicing medicine under it for some years. He was at the head of a Woman's Hospital in one of the cities in that region and a teacher in Gynecology. He was very familiar with the president, faculty and dignitaries of the College, and in the social circles of the city. As he was somewhat patronizing in his attendance upon the lectures, some surprise was expressed that he did not receive the honors of the college, having come so far, and made such a demonstrative effort; but he was found lamentably deficient in his examinations. The examination in chemistry is understood to have been the most difficult and the least practical. The "plucking" of so large a proportion of the graduating class is a good indication. It indicates the elevation of the standard of medical education, and if continued and the example followed by all the medical colleges in the country, it will give the people a better and more intelligent class of medical practitioners, much needed to stem the tide of quackery which is pouring in upon us from every direction.

The graduating exercises were held in the Howard Opera House, and it was well filled with an appreciative audience. The degrees were conferred in a very imposing manner by President Buckham. The prizes of \$50 and \$25, and the "honor man" of the class were announced by Prof. A. P. Grinnell, Dean of the Faculty, and the "Valedictory" was safely delivered by J. C. O'Brien, amid the congratulations of the audience and the exalting strains of sweet music by the Opera House Orchestra. Following these exercises came the elegant scholarly address of ex-Senator Patterson, Superintendent of Public Instruction of New Hampshire. It was listened to with deep interest. No abstract of it would do justice to it. The usual banquet and reception was held at the Van Ness House, was participated in by some one hundred and fifty people, and with its menu, after-dinner speeches, music and songs continued to a late hour.

The State of Vermont has a State Board of Health, but so little has been heard from it, that the people have hardly yet found it out. In making the appointments for members of the Board the Governor seemed to ignore the physicians and others who had taken the most interest in its establishment, and hence it lacks the enthusiasm and vigor which is needed to make it a success. O. P. Q.

The Wholesomeness of Swill-Milk.

Dr. Geo. H. Rohé writes as follows in *Science* of July 22d:

The discussion carried on in the pages of *Science* for some weeks past upon the healthfulness of milk from cows fed upon distillery-swill has, in my opinion, failed to definitely settle the question. There can be no doubt of the vital importance of the matter, and all physicians and sanitarians will agree that a solution of the problem is highly desirable.

1. I venture to say that no positive evidence has been submitted showing any ill effect of swill upon cows fed with it. The evils attributable to it are largely, if not entirely, to be ascribed to the unsanitary surroundings of the animals.

2. Whatever evidence has any positive value indicates that swill is equally as good and proper food (used with judgment) as hay, dried fodder, ensilage, or bulbous roots. These all differ widely in chemical composition from the green foods (grass, clover, green oats, and corn), which may be looked upon as the normal food of cows.

3. It may be worth while remembering that lactation in a dairy is not a normal process. Dairy-cows are "milk-machines." The dairy business would not be very profitable if lactation were not forced to some degree.

4. Experienced agriculturists, like Professor Armsby and Dr. Sturtevant (*Science*, ix. pp. 602-3), have failed to see any ill effects attributable entirely to swill, and such veterinarians of ability as Professor Law and Dr. Salmon (*Ibid.* p. 552) corroborate this testimony.

5. The facts collated by Professor Brewer (*Ibid.*, p. 550), showing the ready absorption of germs and odors by milk, the transmission of the flavor of various odoriferous substances eaten by the animal to the secretion, the passage of certain drugs administered medicinally into the milk of nursing women, or the notorious fact that swill-milk stables are "proverbially foul and stinking," have no bearing upon the case. The evidence required to establish the unwholesomeness of swill as food for milk-giving animals must be of a different character.

6. While it may be conceded that "chemical analyses will not settle the question" of the wholesomeness of swill-milk; the fact remains that we have at present no other way of determining the physical qualities of a specimen of milk. Bacteriological investigation may determine the presence of the germs of tuberculosis, typhoid, and, in view of recent discoveries, of scarlet-fever, but

will not enable us to ascertain the relative proportions of the saccharine, fatty, aqueous, or proteid matters present. Chemistry is here still our main-stay, and, other things being equal (more definitely, disease-germs being absent), a specimen of milk nearly approaching the chemical standard established by Koenig may be looked upon as a wholesome food. Other factors besides the food of the animal enter into the production of milk. The age of the animal, period of lactation, time when the milk is drawn, and general sanitary condition, must not be ignored.

7. The asserted greater firmness, and consequent indigestibility, of the coagulum in swill milk is not based upon a sufficient number of observations to admit of unquestioned acceptance. It should be easy to determine this in any chemical laboratory. No single series of observations would decide this, however. It would be necessary to test milk from cows fed upon swill but kept under good sanitary conditions, side by side with milk from animals kept under the ordinary conditions of city stable-life, and fed upon various foods.

8. A scientific solution of the question will not be furthered by prejudiced appeals or unreasoning denunciation. Patient investigation, keeping in view all circumstances of the question, and avoiding all one-sidedness in considering the matter, will alone bring about the object desired. Personally I at present occupy the same standpoint as Professor Armsby (*Science*, x., p. 4), "Much of the common prejudice against the use of distillery-slops appears to be occasioned by their irrational application, and frequently by the filthy surroundings of the animals, rather than by anything injurious in the feeding-stuff itself."

Leeches.

The first to employ leeches was Themison, a physician of Laodicea and contemporary of Pompey. He was also the founder of the sect of the Methodici, and is often cited as an authority, especially by Caelius Aurelianus. Dr. Greenhill distinguishes him from the Themison satirized by Juvenal (x., 221), who, it being then the custom with artists of every kind to assume the name of celebrities in the same walk, no doubt called himself after his distinguished predecessor. This assumption of names is one of the many difficulties besetting the historian of ancient medicine.

Loco Weed.

This plant, a pest in many parts of the extreme Western States, is said to act as an intoxicant to animals that feed upon it. We note that Prof. L. E. Sayre, of the Kansas State University, Department of Pharmacy, in connection with others, and the Board of Agriculture of that State, are investigating the physiological effects upon animals.

"A Bone of Contention."

A surgical case of much interest, which is reported as having occasioned a heated discrepancy of opinion among the attending physicians who were called in to decide its nature, recently occurred in St. Louis. A man fractured his thigh while pulling off his boot. An incision was made and a "ragged break" of the bone presented. Five of the physicians diagnosed the existence of sarcoma as accounting for the occurrence of the fracture from so trivial a cause, and advised amputation. But Drs. Eisler and Franklin protested that sarcoma was not present, and submitted their side of the controversy to Dr. Agnew, of Philadelphia, who wrote that fractures, while rarely the result of such a cause as was claimed to have produced it in this case, might so result. Microscopic examination of these tissues, however, substantiated Dr. Eisler in his opinion of the case.

Items.

—Pittsburg physicians claim that a young man of that city died from the effects of a patent anti-fat.

—The State Medical Society of West Virginia held its twentieth annual meeting at Greenbrier, White Sulphur Springs, West Va., July 13th to 15th, 1887, inclusive.

—Dr. Sidney Ringer, F. R. S., has been appointed the successor of the late Dr. Wilson Fox to the Holme Professorship of Clinical Medicine at University College, London.

—Dr. Morris Longstreth recently showed the class at the Pennsylvania Hospital some cases of tonsillitis which had simply been treated by applying turpentine stupes to the neck, with gratifying results.

—An interesting anatomical anomaly was recently presented to the New York Obstetrical Society, by Dr. Grandin. There were two humeri in the right arm, and three radii and ulnæ, with three right hands.

—M. Gayon and Dupetit at a recent sitting of the French Academy, presented a

method for preventing the secondary fermentation in the production of alcohol, to which the formation of the higher alcohols are due. It was the addition of bismuth salts to the fermenting fluid, they claimed, that thereby only the pure ethylic alcohol was generated.

—The editor of the *Denver Medical Times* in an excellent article against abortionists says: "The attitude of the church is very indifferent on this question." Such suggestions do great injustice to both Catholicism and Protestantism. The Roman church as well as the Methodist Episcopal, Protestant Episcopal, Baptist and Presbyterian churches speak with no uncertain sound on this question. We of the medical profession should first thoroughly remove the beam from our own eyes before we tackle the mote that darkens the moral vision of any weak theologian.—*Southern California Practitioner.*

—Dr. J. Bell, of the Inland Revenue Laboratory, London, seeking for a practical method for distinguishing between horse-flesh and beef, has shown that the usual physical appearances relied upon by the inspector of slaughter-houses at Paris are not certain. He observed that the adipose tissue of the horse was of a softer and more oily nature than that of beef. Upon experiment, he found that horse-fat at 70° F. formed a clear oil, and the amount of solid fat deposited at lower temperature was comparatively small. The melting point of beef-fat varied between 110° and 116° F. The specific gravity of horse-fat at 100° was 0.9084 to .9088, while, with beef-fat, it was 0.9036 to .9040. This difference affords a positive means for distinguishing horse-flesh from beef.

OBITUARIES.**DR. WILLIAM S. LITTLE.**

DR. WILLIAM SEELY LITTLE was born in New York City, December 17, 1848. He was graduated at Princeton College in 1868, and at Bellevue Medical College in 1870. He afterwards served as resident physician at Bellevue Hospital and at Mt. Sinai Hospital, New York. He also held various appointments in other institutions in New York city, among them one in the Eye Infirmary. During this period he was associated as assistant, both in public and private work, with Dr. Henry D. Noyes, with whom he was connected by marriage. It is to this association that his early interest in ophthalmic surgery is to be ascribed. In 1873 he went to Europe, and spent nearly a year in study, devoting himself especially to

diseases of the eye. Shortly after his return, September 17, 1874, he married Miss Mary U. Wilson, a daughter of Dr. Ellwood Wilson, of Philadelphia; and the following year, resigning his appointment in New York, he removed his residence permanently to Philadelphia. After a short time spent in general practice, in which he gave promise of unusual success, he yielded to the bent of his inclinations, and began to devote himself exclusively to the eye. In 1877 he was graduated at the Jefferson Medical College, and was thereupon appointed chief assistant to the eye department at the Jefferson Hospital, and ophthalmic surgeon to the Church Home at Angora. These positions he held until his death, which occurred February 17, 1887, after a slowly progressive illness of three years.

This is a brief and incomplete history of one of nature's noblemen, who the writer believes sacrificed himself on the altar of his profession. After his premonition of lung trouble, often have I urged him to give up his laborious positions and remove to a clime more congenial to his health, and at the same time lessen his labors. This he was always promising and intending to do, but, alas! he postponed it too long, feeling that he could not give up such a valuable field for study as his hospital positions. He died in the prime of life, and on the verge of what promised to be a useful and distinguished future. Refined, generous, honest and candid, he was never happier than when assisting others, either in or out of the profession. To esteem him properly one must have known him well, and the more he was known the more he grew upon any acquaintance he ever made. WM. B. ULRICH.

Chester, Pa.

DR. E. D. STANDIFORD.

Dr. E. D. Standiford died at his home in Louisville, July 26th, 1887. He died suddenly and peacefully, retaining his faculties to the last. Dr. Standiford had been a candidate for the United States Senate for several months. Dr. Standiford was born December 28th, 1831. He was married three times and leaves seven children. His last marriage was on July 7th, and he had not been out of the house but three times since the wedding. Dr. Standiford was the most prominent capitalist of Louisville. He served several times in the state senate and was a member of the Forty-third Congress. He was president of the Louisville and Nashville Railroad. His fortune is placed at two millions.

DR. JOHN C. LEVIS.

Dr. John C. Levis, one of the best known physicians in Western Pennsylvania, died at his residence in West Bridgewater, July 27th, 1887, aged 58 years. When the war broke out he was made surgeon of the 58th Regiment. He was transferred to several other regiments, and was finally stationed at Pittsburgh as post surgeon. He established the Government Hospital in that city. He also had charge of the Government hospital at Chambersburg during a portion of the war.

J. D. WARREN, M. D.

Dr. J. D. Warren, of Meduia, N. Y., one of the most prominent physicians of Orleans County, died on the 10th inst., of Cirrhosis of the Liver. His age was 56 years. Dr. Warren was a man of magnetic presence, and made friends whose kind regards and good wishes he always retained. He was a most delightful companion and possessed generous qualities which will never be forgotten by those who knew him. In accordance with his wishes his remains were cremated in Buffalo on the 13th of July.

There have been no changes in the Medical Corps of the Navy for the week ending July 30, 1887.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, U. S. Army, from July 24, 1887, to July 30, 1887:

Col. D. S. Magruder, Surgeon, granted leave of absence for one month, to take effect on or about August 10, 1887. S. O. 170, A. G. O., July 25, 1887.
Major D. G. Caldwell, Surgeon; order relieving him from duty at Ft. D. A. Russell, Wyo., and assigning him to duty at Ft. Assiniboine, Mont., is revoked. S. O. 168, A. G. O., July 22, 1887.

Major P. J. A. Cleary, Surgeon, ordered to Ft. Assiniboine, Mont., instead of Ft. D. A. Russell, Wyo. S. O. 168, A. G. O., July 22, 1887.

Major Ely McClellan, Surgeon, detailed as member of a board of survey to meet at the Medical Purveying Depot, St. Louis, Mo., on August 1, 1887. S. O. 173, A. G. O., July 28, 1887.

Capt. S. G. Cowduy, Asst. Surgeon, granted one month's leave, to take effect on or about July 24. S. O. 79, Dept. Texas, July 13, 1887.

Capt. H. G. Burton, Asst. Surgeon, sick leave of absence extended three months. S. O. 171, A. G. O., July 26, 1887.

Capt. E. T. Gardner, Asst. Surgeon, ordered for duty at Ft. Reno, Ind. T. S. O. 170, A. G. O., July 25, 1887.

1st Lt. C. S. Black, Asst. Surgeon, ordered for duty as Post Surgeon, Ft. Bliss, Tex., during the absence, on leave of Capt. S. G. Cowduy, Asst. Surgeon. S. O. 79, Dept. of Texas, July 13, 1887.

1st Lt. W. D. McCaw, Asst. Surgeon, ordered for temporary duty at Ft. Riley, Kan. S. O. 78, Dept. Mo., July 25, 1887.